

MARTIUS SCARLET BLUE (MSB) KIT

VERSION 4

The kit contains:

Acid alcohol

Aniline Blue, solution

Ferri reagent, Weigert B

Hematoxylin, Weigert A

Martius Yellow, solution

Phosphotungstic acid, 1% solution

Ponceau S, solution

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|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| SECTION 1: Identification of the substance/mixture and of the company/undertaking | | |
|--|---|--|
| 1.1 | Product identifier | |
| | Trading name: | ACID ALCOHOL |
| | Chemical name: | - |
| | Catalogue number: | KA-OT-X** |
| 1.2 | Relevant identified uses of the substance or mixture and uses advised against | |
| | Uses: | Reagent for differentiation during regressive hematoxylin staining method. |
| | Uses advised against: | Only the identified uses are advised. |
| | Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3 | Details of the supplier of the safety data sheet | |
| | Supplier: | BioGnost Ltd. |
| | Address: | Medjugorska 59, Zagreb |
| | Telephone number: | +385 1 2409997 |
| | Telefax.: | +385 1 2404039 |
| | e-mail of competent person: | msds@biognost.hr |
| | National contact: | - |
| 1.4 | Emergency telephone number | |
| | National Protection and Rescue Directorate: | 112 |
| | Medical information: | +385 1 2348 342 |
| | Other information: | - |

| SECTION 2. Hazards identification | | |
|--|--|---------------------|
| 2.1 | Classification of the substance or mixture | |
| 2.1.1 | Classification according to Regulation (EC) No 1272/2008 (CLP) | |
| | Hazard class and category code: | Hazard statements*: |
| | Flam. Liq. 2 | H225 |
| 2.1.2. | Additional information | |
| | - | |
| *For full text of Hazard- and EU Hazard-statements: see SECTION 16 | | |
| 2.2 | Label elements | |
| | Product identification: | ACID ALCOHOL |
| | Identification number: | - |
| | Authorization number: | - |

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| Hazard pictograms: |  GHS02 |
| Signal word: | Danger |
| Hazard statements: | H225 Highly flammable liquid and vapor. |
| Precautionary statements: | P210 Keep away from heat, hot sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/face protection. |
| Supplemental hazard information (EU): | - |

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| 2.3 | Other hazards |
| | <p>The product has no other known specific hazards for human or environment.</p> <p>Results of PBT and vPvB assessment: Based on available data, the product does not contain any PBT or vPvB substances.</p> <p>Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.</p> |

SECTION 3. Composition/information on ingredients

| CAS/EC/ Index number | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--|-----------------------|-----------------------------|------------------------|--|
| 64-17-5/ 200-578-6/ 603-002-00-5 | 01-2119457610-43-0147 | 70 - 90 % | ethanol | Flam. Liq. 2; H225 |
| 7647-01-0/ 231-595-7/ 017-002-00-2 | - | < 1 % | hydrochloric acid, 37% | Skin Corr. 1B; H314 STOT SE 3; H335 |

SECTION 4. First aid measures

4.1 Description of first aid measures

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| General notes: | If the suggested first aid measures do not prove sufficient, seek medical attention. |
| Following inhalation: | Take the victim into fresh air, loosen his clothes and place him in a comfortable position. If breathing difficulty occurs, administer artificial respiration. In case of complaints call a physician. |

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| | Following skin contact: | Remove the contaminated clothes. Wash the skin surface under plenty of running water. Seek medical assistance if the symptoms of irritation remain. |
| | Following eye contact: | In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 10 minutes). If the symptoms remain, immediately call in ophthalmologist. |
| | Following ingestion: | Place the victim in a comfortable position. Rinse the mouth with clean water. If the victim is conscious induce vomiting. Do not give the victim anything orally, and do not induce vomiting if the victim is unconscious or suffers from convulsions. |
| | Self-protection of the first aider: | - |
| 4.2 | Most important symptoms and effects, both acute and delayed | |
| | Following inhalation: | Inhalation of larger quantities may affect the central nervous system. |
| | Following skin contact: | Prolonged or repeated dermal contact may cause the defatting and dryness of the skin. |
| | Following eye contact: | May irritate the eyes. |
| | Following ingestion: | Ingestion of larger quantities may affect the central nervous system. |
| 4.3 | Indication of any immediate medical attention and special treatment needed | |
| | If larger quantities have entered the body, obtain medical treatment (gastric lavage, activated carbon). | |

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| SECTION 5. Firefighting measures | | |
| 5.1 | Extinguishing media | |
| | Suitable extinguishing media: | Extinguishing powder, alcohol-resistant foam, water, carbon-dioxide. |
| | Unsuitable extinguishing media: | Water with full jet. |
| 5.2 | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | Highly flammable liquid and vapour. In case of fire, smoke, and other combustion products (carbon monoxide, carbon dioxide) may be formed, the inhalation of such combustion products can have serious adverse effects on health. Vapours may form an explosive mix with air. Vapours may be ignited by open flames, sparks, electrical equipment, or static charge. Vapours may travel to great distances, ignite in contact with ignition sources and flash back to the primer source (container). Vapours of ethyl alcohol mix greatly with air and may form an explosive mixture. Air containing 3.3 – 19 % ethyl alcohol vapours may explode in contact with ignition sources. Diluting the mixture with large amounts of water results in the loss of its flammability (around 10 % concentration of ethyl alcohol). |
| 5.3 | Advice for firefighters | |
| | Wear full protective clothing and self-contained breathing apparatus. Cool the fire affected containers with water spray. Use water spray to dissipate alcohol vapours. | |

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| 5.4 | Additional information |
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| SECTION 6. Accidental release measures |
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| 6.1 | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Avoid contact with skin, eyes and clothing and inhaling gases, vapours and aerosols. Ensure adequate ventilation. Vapours may accumulate at floor level in low and confined spaces. Remove all heat, ignition and spark sources, turn off machines. Ignition spark arrestor must not be operated in the danger area. Use spark-proof tools. Be aware of the risk of slipping. | |
| 6.2 | Environmental precautions: | |
| | Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately. | |
| 6.3 | Methods and material for containment and cleaning up | |
| 6.3.1. | Bunding, covering of drains; capping procedures: | Sand protective barrier or barriers made of similar materials. |
| 6.3.2. | Cleaning up: | Collect the spilled product with inert, non-combustible absorbent (e.g. sand, vermiculite, earth) then place into a suitable, closed, properly labelled chemical waste container for removal/disposal. During the collection, placement, disposal of the waste, wear appropriate individual protective equipment. Flush the remains with plenty of water. The product loses its flammability, if diluted with significant amount of water (approx. 10% solution). |
| 6.3.3. | Other information: | Secure proper ventilation. Do not use incompatible materials (see Section 10). |
| 6.4 | Reference to other sections | |
| | See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information. | |

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| SECTION 7. Handling and storage |
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| 7.1 | Precautions for safe handling |
| 7.1.1. | Protection measures |

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| | Measures to prevent fire: | Use in well ventilated storage rooms. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use non-sparkling tools and equipment. |
| | Measures to prevent aerosol and dust generation: | Ensure adequate ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | Protect against electrostatic charges. |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |
| 7.2 | Conditions for safe storage, including any incompatibilities | |
| | Technical measures and storage conditions: | Store in a well-ventilated place, protected from sunlight, away from sources of heat and ignition, in its original, unopened and hermetically sealed packaging, away from oxidizing agents, food, feed and articles of consumption. |
| | Packaging materials: | Manufacturer's original packaging. |
| | Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| | Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| | Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |
| 7.3 | Specific end use(s) | |
| | Recommendations: | - |
| | Industrial sector specific solutions: | - |

| SECTION 8. Exposure controls/personal protection | | | | |
|---|-----------|--|-------------------|-------------------------|
| 8.1 Control parameters | | | | |
| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
| | | ppm | mg/m ³ | |
| Ethanol | 64-17-5 | 1000/- | 1900/- | - |
| Hydrogen chloride | 7647-01-0 | 5/10 | 8/15 | - |

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| Substance name: | - | | | |
| EC No: | - | CAS No: | - | |

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|----------------------------------|-----------------------|----------------------|---------------------------------|
| Oral | - | - | - | - |
| Inhalation | 1900 mg/m ³ (ethanol) | - | - | 380 mg/m ³ (ethanol) |
| Dermal | - | - | - | 343 mg/kg (ethanol) |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|---------------------------------|-----------------------|----------------------|---------------------------------|
| Oral | - | - | - | 87 mg/kg bw/day (ethanol) |
| Inhalation | 950 mg/m ³ (ethanol) | - | - | 114 mg/m ³ (ethanol) |
| Dermal | - | - | - | 206 mg/kg (ethanol) |

PNEC

| Environmental protection target | PNEC |
|------------------------------------|--------------------------|
| Fresh water | 0.96 mg/l (ethanol) |
| Freshwater sediments | 3.6 mg/kg (ethanol) |
| Marine water | 0.79 mg/l (ethanol) |
| Marine sediments | 2.9 mg/kg (ethanol) |
| Food chain | 380-720 mg/kg (ethanol) |
| Microorganisms in sewage treatment | 580 mg/l (ethanol) |
| Soil (agricultural) | 0.63 mg/kg (ethanol) |
| Air | no information available |

8.2 Exposure controls

8.2.1. Appropriate engineering controls

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|---|---|
| <p>Substance/mixture related measures to prevent exposure during identified uses:</p> | <p>In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.</p> |
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| | Structural measures to prevent exposure: | In accordance with Section 7. |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin. Use according to general application methods and with adequate ventilation. Use non-sparkling ventilation system. Provide appropriate personal protective equipment, safety shower and eye-wash station. |
| 8.2.2. | Personal protection equipment | |
| 8.2.2.1. | Eye and face protection: | Use appropriate, chemical-proof protective glasses/face shield (EN ISO 16321-1:2022, EN 166). |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Use appropriate, chemical-resistant protective gloves (EN 374). |
| | Other skin protection: | Use appropriate protective clothing. |
| 8.2.2.3. | Respiratory protection: | In case of normal usage and ventilation, it is not necessary. If concentration of ethyl alcohol exceeds occupational exposure limits in the air, use a self-contained breathing apparatus. For short contact and if the oxygen content of the air is greater than 18 %, use a protective gas mask with filter A (EN 14837/A1). |
| 8.2.2.4. | Thermal hazards: | No thermal hazards known. |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

| SECTION 9. Physical and chemical properties | | | |
|--|---|------------|--------------------------|
| 9.1 | Information on basic physical and chemical properties | | |
| | | Value | Method |
| | Physical state: | liquid | No information available |
| | Colour: | colourless | No information available |

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| | Odour/odour threshold: | ethanol like/no information available | No information available |
| | Melting point / freezing point: | No information available | No information available |
| | Boiling point or initial boiling point and boiling range: | No information available | No information available |
| | Flammability: | No information available | No information available |
| | Lower and upper explosion limit: | No information available | No information available |
| | Flash point: | 21 °C | No information available |
| | Auto-ignition temperature: | No information available | No information available |
| | Decomposition temperature: | No information available | No information available |
| | pH: | 1.2 – 1.5 (20°C) | No information available |
| | Kinematic viscosity: | No information available | No information available |
| | Solubility: | No information available | No information available |
| | Partition coefficient n-octanol/water (log value): | No information available | No information available |
| | Vapour pressure: | No information available | No information available |
| | Density and/or relative density: | No information available | No information available |
| | Relative vapour density: | No information available | No information available |
| | Particle characteristics: | No information available | No information available |
| 9.2 | Other information | | |
| | - | | |

| SECTION 10. Stability and reactivity | | |
|---|-------------------------------------|--|
| 10.1 | Reactivity: | See Section 10.5. |
| 10.2 | Chemical stability: | Stable within normal temperature and general work conditions. |
| 10.3 | Possibility of hazardous reactions: | See Section 10.5. |
| 10.4 | Conditions to avoid: | Keep away from heat, sparks, open flames, strong heating and ignition sources. No smoking. |
| 10.5 | Incompatible materials: | Strong oxidizing agents (inorganic strong acid, nitric acid, perchlorates, peroxy compounds, perchloric acid, permanganates etc.), alkali metals, alkali earth metals. |
| 10.6 | Hazardous decomposition products: | Carbon monoxide and carbon dioxide. |

| SECTION 11. Toxicological information | |
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| 11.1 | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| | Acute toxicity: |

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| Route of exposure: | Method | Species | Dose LD ₅₀ /LC ₅₀ or ATE _{mix} | Exposure time | Results |
|--------------------|--------|------------------|---|---------------|--------------|
| Oral: | - | rat (ethanol) | LD ₅₀ | - | 7.060 mg/kg |
| Dermal: | - | rabbit (ethanol) | LD ₅₀ | - | >20.000 mg/l |
| Inhalation: | - | rat (ethanol) | LC ₅₀ | 4 h | >8.000 mg/l |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|-------------|--------------------------|--------------------------|------|
| Oral: | No information available | No information available | - |
| Dermal: | No information available | No information available | - |
| Inhalation: | No information available | No information available | - |

Aspiration hazard: No information available.

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|-------------------------------|---------------|---------|------------|--------|------|
| Skin corrosion/irritation: | - | - | - | - | - |
| Serious eye damage/irritation | - | - | - | - | - |

Sensitization

| | |
|----------------------------|---------------------------|
| Skin sensitization: | No information available. |
| Respiratory sensitization: | No information available. |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
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| Oral exposure: | Absorption of great quantities may cause dizziness, drunkenness, euphoria, unconsciousness and alcohol poisoning. In case of swallowing great quantities, nausea and vomiting may occur. Repeated or prolonged exposure may lead to liver cirrhosis. |
| Dermal exposure: | After prolonged or repeated exposure symptoms may include: defatting, dryness and cracking of skin. |
| Inhalation exposure: | Inhalation of great quantities may cause dizziness, euphoria and mild irritation of the mucous membranes. |
| Eye exposure: | May cause irritation and redness. |

Repeated dose toxicity (subacute, subchronic, chronic)

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| | Dose | Exposure time | Species | Method | Evaluation | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

Specific target organ toxicity – repeated exposure (STOT RE):

| | Specific effects | Target organ | Note |
|-----------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |
| Chronic dermal | No information available | No information available | - |

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| Chronic inhalation | No information available | No information available | - |
| CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) | | | |
| Carcinogenicity: | Based on available data, the classification criteria are not met. | | |
| Mutagenicity <i>in vitro</i> : | Based on available data, the classification criteria are not met. | | |
| Genotoxicity: | Based on available data, the classification criteria are not met. | | |
| Mutagenicity <i>in vivo</i> : | Based on available data, the classification criteria are not met. | | |
| Germ cell mutagenicity: | Based on available data, the classification criteria are not met. | | |
| Reproductive toxicity: | Based on available data, the classification criteria are not met. | | |
| Summary of evaluation of the CMR properties: | | Based on available data, the classification criteria are not met. | |
| 11.2 | Information on other hazards: | | |
| 11.2.1. | Endocrine disrupting properties: | | |
| | Based on available data, does not contain endocrine disruptors. | | |
| 11.2.2. | Other informations: | | |
| | - | | |

| SECTION 12. Ecological information | | | | | | |
|------------------------------------|------------------|---------------|---------------|--------------------------|----------------------------|------|
| 12.1 Toxicity | | | | | | |
| Acute (short-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | golden orf | No information available | 8.140 mg/l /48 h (ethanol) | - |
| Crustacea: | EC ₅₀ | 48 hours | daphnia magna | No information available | 7.800 mg/l (ethanol) | - |
| Algae/aquatic plants | IC ₅₀ | 4 days | algae | No information available | 5.000 mg/l / 7d (ethanol) | - |
| Other organisms | - | - | - | - | - | - |
| Chronic (long-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |

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| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |

12.2 Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

12.3 Bioaccumulative potential

Octanol-water partition coefficient (log K_{ow})

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-----------------|---------------|----|----|--------|------------|------------------------------------|
| Log Pow: ~ 0.32 | - | - | - | - | - | The product does not bioaccumulate |
| | | | | | | |

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| Bioconcentration factor (BCF) | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Species | Method | Evaluation | Note |
| BCF: 0.66 | No information available | No information available | No information available | - |
| | | | | |

| Chronic ecotoxicity | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4 Mobility in soil

| Known or predicted distribution in environmental compartments: | | | | | | |
|--|--------------------------|--------------------------|--------------------------|------|--|--|
| No information available | | | | | | |
| Surface tension: | | | | | | |
| Value | °C | Concentration | Method | Note | | |
| No information available | No information available | No information available | No information available | - | | |
| | | | | | | |

| Adsorption / desorption | | | | | |
|-------------------------|----------------------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | No information available | No information available | No information available | - |
| Water-air | No information available | No information available | No information available | No information available | - |
| Soil-air | No information available | No information available | No information available | No information available | - |

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| 12.5 | Results of PBT and vPvB assessment |
| | Based on available data, the product does not contain any PBT or vPvB substances. |

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| 12.6 | Endocrine disrupting properties |
| | Based on available data, does not contain endocrine disruptors. |

| | |
|------|--|
| 12.7 | Other adverse effects |
| | Do not let the product or its residues reach sewer system, waterways and soil. |

SECTION 13. Disposal considerations

| | |
|------|-------------------------|
| 13.1 | Waste treatment methods |
|------|-------------------------|

| | |
|---------|--|
| 13.1.1. | Product/Packaging disposal: |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |

| | |
|---------|--|
| 13.1.2. | Waste codes/waste designations according to Law: |
| | Packaging that contains residual hazardous substances or is contaminated with hazardous substances |

| | |
|---------|---|
| 13.1.3. | Waste treatment – relevant information: |
| | No information available |

| | |
|---------|---|
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |

| | |
|---------|---|
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Unused product residues may be burnt. |

| | |
|---------|--|
| 13.1.6. | Relevant Community provisions: |
| | Disposal must be made according to official regulations. |

SECTION 14 TRANSPORT INFORMATION

| | |
|--------------------------|-------------------------------------|
| | Transporting/shipment by road (ADR) |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |

| | | | | | |
|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| | |
|-------------------------------|----|
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by rail (RID)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Inland waterway transport (ADN)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by sea (IMDG)

| | |
|---|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | - |

Transporting/shipment by air (ICAO-TI/IATA-DGR)

| | |
|-------------------------------|------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

| | |
|----------------------|---|
| Further information: | - |
|----------------------|---|

| | | | | | |
|---------------|---------------------|----------------|-------------|----------|---|
| Trading name: | ACID ALCOHOL | | | | |
| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| SECTION 15. Regulatory information | |
|---|---|
| 15.1 | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| | EU regulations |
| | Authorization and/or restrictions of use |
| | Authorizations: - |
| | Restrictions: - |
| | <p>Other EU regulations:</p> <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>COMMISSION REGULATION (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |
| | <p>National legislation:</p> <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2 | Chemical safety assessment |
| | None |

| SECTION 16. Other information | |
|--------------------------------------|--------------------------|
| 16.1 | Indication of changes: - |

| | | | | | |
|---------------|---------------------|----------------|-------------|----------|---|
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| Product code: | KA-OT-X** | Revision date: | 21 Dec 2022 | Version: | 7 |

| | | |
|-------|---|---|
| 16.2 | Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: | <p>225 Highly flammable liquid and vapour.</p> <p>314 Causes severe skin burns and eye damage.</p> <p>335 May cause respiratory irritation.</p> |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

| |
|---|
| ANNEX: Exposure scenario resulting to chemical safety assessment |
| - |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
| Trading name: | ANILINE BLUE, SOLUTION | | |
| Product code: | ABO-OT-X** | Date of compilation: | 21 Dec 2022 |
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| SECTION 1: Identification of the substance/mixture and of the company/undertaking | |
|--|--|
| 1.1. | Product identifier |
| | Trading name: ANILINE BLUE, SOLUTION |
| | Chemical name: - |
| | Catalogue number: ABO-OT-X** |
| 1.2. | Relevant identified uses of the substance or mixture and uses advised against |
| | Uses: For used with Martius Scarlet Blue kit. |
| | Uses advised against: Only the identified uses are advised. |
| | Reason why uses advised against: The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3. | Details of the supplier of the safety data sheet |
| | Supplier: BioGnost Ltd. |
| | Address: Medjugorska 59, Zagreb |
| | Telephone number: +385 1 2409997 |
| | Fax no.: +385 1 2404039 |
| | e-mail of competent person: msds@biognost.hr |
| | National contact: - |
| 1.4. | Emergency telephone number |
| | National Protection and Rescue Directorate: 112 |
| | Medical information: +385 1 2348 342 |
| | Other information: - |

| SECTION 2. Hazards identification | |
|--|--|
| 2.1. | Classification of the substance or mixture |
| 2.1.1. | Classification according to Regulation (EC) No 1272/2008 (CLP) |
| | Hazard class and category code: Hazard statements*: |
| | Not identified as hazardous substance. - |
| 2.1.2. | Additional information |
| | - |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 | |
| 2.2. | Label elements |
| | Product identification: ANILINE BLUE, SOLUTION |
| | Identification number: - |
| | Authorization no.: - |
| | Hazard pictograms: - |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| | |
|---------------------------|---|
| Signal word: | - |
| Hazard statements: | - |
| Precautionary statements: | - |
| Further information: | - |

| | |
|------|---|
| 2.3. | Other hazards |
| | <p>Endocrine Disrupting Properties: No known endocrine disrupting properties</p> <p>Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.</p> |

SECTION 3. Composition/information on ingredients

| CAS/ EC/ Index no. | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--------------------------|--------------------------|--------------------------------|----------------------------------|--|
| - | - | - | Contains no hazardous substances | - |

SECTION 4. First aid measures

| | |
|------|---|
| 4.1. | Description of first aid measures |
| | <p>General notes: -</p> <p>Following inhalation: No information available</p> <p>Following skin contact: No information available</p> <p>Following eye contact: No information available</p> <p>Following ingestion: No information available</p> <p>Self-protection of the first aider: Treat symptomatically.</p> |
| 4.2. | Most important symptoms and effects, both acute and delayed |
| | <p>Following inhalation: No information available</p> <p>Following skin contact: No information available</p> <p>Following eye contact: No information available</p> <p>Following ingestion: No information available</p> |
| 4.3. | Indication of any immediate medical attention and special treatment needed |
| | - |

SECTION 5 Firefighting measures

| | |
|------|--|
| 5.1. | Extinguishing media |
| | <p>Suitable extinguishing media:</p> <p>Small fire - water spray, dry powder, CO₂</p> <p>Large fire - water spray or alcohol-resistant foam</p> |

| | | | |
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| | | |
|------|--|--------------------------|
| | Unsuitable extinguishing media: | water jet |
| 5.2. | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | No information available |
| 5.3. | Advice for firefighters | |
| | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. | |
| 5.4. | Additional information | |
| | Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media. | |

| | | |
|---|---|---|
| SECTION 6. Accidental release measures | | |
| 6.1. | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Wear protective equipment (see Section 8). | |
| 6.2. | Environmental precautions: | |
| | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. | |
| 6.3. | Methods and material for containment and cleaning up | |
| 6.3.1. | Bunding, covering of drains; capping procedures: | Sand or clay barriers. |
| 6.3.2. | Cleaning up: | Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information: | - |
| 6.4. | Reference to other sections | |
| | See Section 7 for information about secure handling. See Section 8 for information about personal protective equipment. See Section 13 for information about containment. | |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| SECTION 7. Handling and storage | |
|--|--|
| 7.1. | Precautions for safe handling |
| 7.1.1. | Protection measures |
| | Measures to prevent fire: |
| | Measures to prevent aerosol and dust generation: |
| | Measures to protect the environment: Other measures: |
| 7.1.2. | Advice on general occupational hygiene: |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |
| 7.2. | Conditions for safe storage, including any incompatibilities |
| | Technical measures and storage conditions: |
| | Packaging materials: |
| | Requirements for storage rooms and vessels: |
| | Advices for storage equipment: |
| | Further information on storage conditions: |
| 7.3. | Specific end use(s) |
| | Recommendations: |
| | Industrial sector specific solutions: |

| SECTION 8. Exposure controls/personal protection | | | | |
|---|--------------------------|--------|--|-------------------------|
| 8.1. | Control parameters | | | |
| | Substance | CAS No | Occupational exposure limit values/short term values | Biological limit values |
| | | | ppm | mg/m ³ |
| | - | - | - | - |
| | No information available | | | |
| | | | | |
| Substance name: | - | | | |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
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| | | | | |
|--------|---|---------|---|--|
| EC No: | - | CAS No: | - | |
|--------|---|---------|---|--|

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

PNEC

| Environmental protection target | PNEC |
|------------------------------------|--------------------------|
| Fresh water | No information available |
| Freshwater sediments | No information available |
| Marine water | No information available |
| Marine sediments | No information available |
| Food chain | No information available |
| Microorganisms in sewage treatment | No information available |
| Soil (agricultural) | No information available |
| Air | No information available |

8.2. Exposure controls

8.2.1. Appropriate engineering controls

| | |
|--|---|
| Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace. |
| Structural measures to prevent exposure: | No information available |
| Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| Technical measures to prevent exposure: | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| | | | |
|----------|---|---|--|
| 8.2.2. | Personal protection equipment | | |
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (preventing splashing) (EN 166) or visor. | |
| 8.2.2.2. | Skin protection | | |
| | Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥ 0.50 mm Break through time: >480 min | |
| | Other skin protection: | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335). | |
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point $>65^{\circ}\text{C}$) according to EN 14387) used when concentration levels exceed GVI. | |
| 8.2.2.4. | Thermal hazards: | No information available | |
| 8.2.3. | Environmental exposure controls | | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 | |
| | Structural measures to prevent exposure: | Use modern equipment. | |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. | |
| | Technical measures to prevent exposure: | See Section 6 | |

SECTION 9. Physical and chemical properties

| | | | |
|------|---|--|--------------------------|
| 9.1. | Information on basic physical and chemical properties | | |
| | | Value | Method |
| | Physical state: | liquid | No information available |
| | Colour: | dark blue | No information available |
| | Odour/odour threshold: | mild acetic acid like/no information available | No information available |
| | Melting point / freezing point: | No information available | No information available |
| | Boiling point or initial boiling point and boiling range: | No information available | No information available |
| | Flammability: | No information available | No information available |
| | Lower and upper explosion limit: | No information available | No information available |
| | Flash point: | No information available | No information available |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | | |
|--|--------------------------|--------------------------|
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | 2.5 -3.5 | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |
| 9.2. | Other information | |
| | - | |

| SECTION 10. Stability and reactivity | | |
|---|-------------------------------------|--|
| 10.1. | Reactivity: | See subsections 10.3 through 10.5. |
| 10.2. | Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3. | Possibility of hazardous reactions: | No information available. |
| 10.4. | Conditions to avoid: | No information available. |
| 10.5. | Incompatible materials: | No information available. |
| 10.6. | Hazardous decomposition products: | No information available. |

| SECTION 11. Toxicological information | | | | | |
|--|---|---------|---|---------------|---------|
| 11.1. | Information on toxicological effects | | | | |
| | Acute toxicity: | | | | |
| Route of exposure: | Method | Species | Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
| Oral exposure: | No information available | - | LD ₅₀ | - | - |
| Dermal exposure: | No information available | - | LD ₅₀ | - | - |
| Inhalation exposure: | No information available | - | LC ₅₀ | - | - |
| | Specific target organ toxicity – single exposure (STOT SE): | | | | |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
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| | Specific effects | Target organ | Note | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Oral exposure: | No information available | No information available | - | | | |
| Dermal exposure: | No information available | No information available | - | | | |
| Inhalation exposure: | No information available | No information available | - | | | |
| Respiratory irritation: No information available | | | | | | |
| Irritation and corrosion | | | | | | |
| | Exposure time | Species | Evaluation | Method | Note | |
| Skin irritation: | - | - | - | - | - | |
| Eye irritation: | - | - | - | - | - | |
| Sensitization | | | | | | |
| Dermal exposure: | No information available | | | | | |
| Inhalation exposure: | No information available | | | | | |
| Symptoms related to the physical, chemical and toxicological characteristics | | | | | | |
| Oral exposure: | No information available | | | | | |
| Dermal exposure: | No information available | | | | | |
| Inhalation exposure: | No information available | | | | | |
| Eye exposure: | No information available | | | | | |
| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
| | Dose | Exposure time | Species | Method | Evaluation | Note |
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
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| | | | | | | |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

Specific target organ toxicity – repeated exposure (STOT RE):

| | Specific effects | Target organ | Note |
|-----------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |

CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)

| | |
|--------------------------------|--------------------------|
| Carcinogenicity: | No information available |
| Mutagenicity <i>in-vitro</i> : | No information available |
| Genotoxicity: | No information available |
| Mutagenicity <i>in-vivo</i> : | No information available |
| Germ cell mutagenicity: | No information available |
| Reproductive toxicity: | No information available |

| | | | | | |
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| | | |
|---|---|---|
| Summary of evaluation of the CMR properties: | | - |
| 11.2 Information on other hazards: | | |
| 11.2.1. Endocrine disrupting properties: | | |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. | - |
| 11.2.2. Other informations: | | |
| - | | |

| SECTION 12. Ecological information | | | | | | |
|---|------------------|---------------|--------------------------|--------------------------|------------|------|
| 12.1. Toxicity | | | | | | |
| Acute toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | - | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | - | - |
| Algae/aquatic plants | IC ₅₀ | 8 days | No information available | No information available | - | - |
| Microorganisms | LC ₅₀ | 72 hours | - | - | - | - |
| Chronic toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | - | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | - | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | - | - |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | | | | | | |
|-----------------|---|---|---|---|---|---|
| Other organisms | - | - | - | - | - | - |
|-----------------|---|---|---|---|---|---|

12.2. Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water (log Kow):

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|--------------------------|----|----|--------------------------|--------------------------|------|
| - | No information available | - | - | No information available | No information available | - |
| | | | | | | |

Bioconcentration factor (BCF)

| Value | Species | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

Chronic ecotoxicity

| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
|--------------------------|------------------|---------------|---------|--------|----------------|------|
| Chronic toxicity on fish | LC ₅₀ | No | No | No | No information | - |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trading name: | ANILINE BLUE, SOLUTION | | | | |
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| | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| | | information available | information available | information available | available | |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4. Mobility in soil

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Known or predicted distribution in environmental compartments: | | | | | |
| No information available | | | | | |
| Surface tension: | | | | | |
| | Value | °C | Concentration | Method | Note |
| | No information available | No information available | No information available | No information available | - |
| | | | | | |

Adsorption / desorption

| | | | | | | |
|------------|-------------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | information available | No information available | No information available | No information available | - |
| Water-air | No information available | information available | No information available | No information available | No information available | - |
| Soil-air | No information available | information available | No information available | No information available | No information available | - |

12.5. Results of PBT and vPvB assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.6. Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| | |
|-------|--------------------------|
| 12.7. | Other adverse effects |
| | No information available |

SECTION 13. Disposal considerations

| | |
|-------|-------------------------|
| 13.1. | Waste treatment methods |
|-------|-------------------------|

| | |
|---------|--|
| 13.1.1. | Product/Packaging disposal: |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |

| | |
|---------|--|
| 13.1.2. | Waste codes/waste designations according to Law: |
| | No information available |

| | |
|---------|---|
| 13.1.3. | Waste treatment – relevant information: |
| | No information available |

| | |
|---------|---|
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |

| | |
|---------|---|
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |

| | |
|---------|--------------------------------|
| 13.1.6. | Relevant Community provisions: |
| | - |

SECTION 14. Transport information

| | |
|-------------------------------|---------------------------------------|
| | Transporting/shipment by road (ADR) |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| | |
|---|---------------------------------------|
| Transporting/shipment by rail (RID) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Inland waterway transport (ADN) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by sea (IMDG) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by air (ICAO-TI/IATA-DGR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Further information: | - |

| | |
|---|--|
| SECTION 15. Regulatory information | |
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| | EU regulations |
| | Authorization and/or restrictions of use |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trading name: | ANILINE BLUE, SOLUTION | | | | |
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| | |
|--|--|
| Authorizations: | - |
| Restrictions: | - |
| Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |
| National legislation: | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2. Chemical safety assessment | None |

| | |
|--------------------------------------|---|
| SECTION 16. Other information | |
| 16.1. Indication of changes: | - |

| | | | |
|---------------|-------------------------------|----------------------|-------------|
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| Product code: | ABO-OT-X** | Date of compilation: | 21 Dec 2022 |
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| | | |
|-------|---|---|
| 16.2. | Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: | - |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

| |
|--|
| ANNEX: |
| Exposure scenario resulting to Chemical safety assessment |
| - |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | |
|---|---|
| 1.1. Product identifier | |
| Trading name: | FERRI REAGENT, WEIGERT B |
| Chemical name: | - |
| Catalogue number: | FR-OT-X** |
| 1.2. Relevant identified uses of the substance or mixture and uses advised against | |
| Uses: | For use in special staining kits. |
| Uses advised against: | Only the identified uses are advised. |
| Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3. Details of the supplier of the safety data sheet | |
| Supplier: | BioGnost Ltd. |
| Address: | Medjugorska 59, Zagreb |
| Telephone number: | +385 1 2409997 |
| Fax no.: | +385 1 2404039 |
| e-mail of competent person: | msds@biognost.hr |
| National contact: | - |
| 1.4. Emergency telephone number | |
| National Protection and Rescue Directorate: | 112 |
| Medical information: | +385 1 2348 342 |
| Other information: | - |

| SECTION 2 HAZARDS INFORMATION | |
|--|--------------------------|
| 2.1. Classification of the substance or mixture | |
| 2.1.1. Classification according to Regulation (EC) No 1272/2008 (CLP) | |
| Hazard class and category code: | Hazard statements*: |
| Not identified as hazardous substance. | - |
| 2.1.2. Additional information | |
| - | |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 | |
| 2.2. Classification according to EC Directive Nr. 1272/2008 CLP) | |
| Product identification: | FERRI REAGENT, WEIGERT B |
| Identification number: | - |
| Authorization no.: | - |
| Hazard pictograms: | - |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | |
|---------------------------------------|---|
| Signal word: | - |
| Hazard statements: | - |
| Precautionary statements: | - |
| Supplemental hazard information (EU): | - |

| | |
|---|---------------|
| 2.3. | Other hazards |
| Endocrine Disrupting Properties: No known endocrine disrupting properties | |
| Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | |

| |
|---|
| SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS |
|---|

| CAS/ EC/ Index no. | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--|---------------------------|--------------------------------|----------------------------|--|
| 7782-61-8/ 616-509-1/ - | - | < 0.5% | ferric nitrate nonahydrate | Skin Irrit. 2; H315 Eye Irrit. 2; H319 |
| 7647-01-0/ 231-595-7/ 017-002-00-2 | 01-2119484862- 27-xxxx | < 1% | hydrochloric acid, 37% | Skin Corr. 1B; H314 STOT SE 3; H335 |

| |
|-------------------------------------|
| SECTION 4 FIRST AID MEASURES |
|-------------------------------------|

| | |
|------|---|
| 4.1. | Description of first aid measures |
| | General notes: - |
| | Following inhalation: Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician. |
| | Following skin contact: Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain. |
| | Following eye contact: Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician. |
| | Following ingestion: Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention. |
| | Self-protection of the first aider: Treat symptomatically. |
| 4.2. | Most important symptoms and effects, both acute and delayed |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | | |
|------|--|--|
| | Following inhalation: | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea. |
| | Following skin contact: | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin. |
| | Following eye contact: | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation. |
| | Following ingestion: | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| 4.3. | Indication of any immediate medical attention and special treatment needed | |
| | - | |

| | | |
|--|---|---|
| SECTION 5 FIREFIGHTING MEASURES | | |
| 5.1. | Extinguishing media | |
| | Suitable extinguishing media: | Small fire - water spray, dry powder, CO ₂ Large fire - water spray or alcohol-resistant foam |
| | Unsuitable extinguishing media: | water jet |
| 5.2. | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | No information available |
| 5.3. | Advice for firefighters | |
| | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. | |
| 5.4. | Additional information | |
| | Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media. | |

| | | |
|--|---|--|
| SECTION 6 ACCIDENTAL RELEASE MEASURES | | |
| 6.1. | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Wear protective equipment (see Section 8). | |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | |
|--|--|
| 6.2. Environmental precautions: | |
| | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. |
| 6.3. Methods and material for containment and cleaning up | |
| 6.3.1. | Bundling, covering of drains; capping procedures: Sand or clay barriers. |
| 6.3.2. | Cleaning up: Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information: - |
| 6.4. Reference to other sections | |
| | - |

| | |
|--|--|
| SECTION 7 HANDLING AN STORAGE | |
| 7.1. Precautions for safe handling | |
| 7.1.1. Protection measures | |
| | Measures to prevent fire: Keep away from sources of heat and ignition. Do not smoke. |
| | Measures to prevent aerosol and dust generation: Secure proper ventilation. |
| | Measures to protect the environment: Prevent spilling into the sewage system and waterways. |
| | Other measures: - |
| 7.1.2. Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. |
| 7.2. Conditions for safe storage, including any incompatibilities | |
| | Technical measures and storage conditions: Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances. |
| | Packaging materials: Manufacturer's original packaging. |
| | Requirements for storage rooms and vessels: Keep away from food and drink. Keep the containers tightly closed. |
| | Advices for storage equipment: The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | |
|--|---|
| Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9). |
| 7.3. Specific end use(s) | |
| Recommendations: | - |
| Industrial sector specific solutions: | - |

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
|-------------------|-----------|--|-------------------|-------------------------|
| | | ppm | mg/m ³ | |
| Hydrogen chloride | 7647-01-0 | 5/10 | 8/15 | - |

| | |
|-----------------|---|
| Substance name: | - |
| EC No: | - |
| CAS No: | - |

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

PNEC

| Environmental protection target | PNEC |
|---------------------------------|--------------------------|
| Fresh water | No information available |
| Freshwater sediments | No information available |
| Marine water | No information available |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | |
|------------------------------------|--------------------------|
| Marine sediments | No information available |
| Food chain | No information available |
| Microorganisms in sewage treatment | No information available |
| Soil (agricultural) | No information available |
| Air | No information available |

| | |
|-------------|--------------------------|
| 8.2. | Exposure controls |
|-------------|--------------------------|

| | |
|---------------|-----------------------------|
| 8.2.1. | Engineering measures |
|---------------|-----------------------------|

| | |
|--|---|
| Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace. |
| Structural measures to prevent exposure: | No information available |
| Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| Technical measures to prevent exposure: | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. |

| | |
|---------------|--------------------------------------|
| 8.2.2. | Personal protection equipment |
|---------------|--------------------------------------|

| | | |
|----------|--------------------------|---|
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (preventing splashing) (EN 166) or visor. |
|----------|--------------------------|---|

| | |
|-----------------|------------------------|
| 8.2.2.2. | Skin protection |
|-----------------|------------------------|

| | |
|------------------|--|
| Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min |
|------------------|--|

| | |
|------------------------|---|
| Other skin protection: | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335). |
|------------------------|---|

| | | |
|----------|-------------------------|--|
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
|----------|-------------------------|--|

| | | |
|----------|------------------|--------------------------|
| 8.2.2.4. | Thermal hazards: | No information available |
|----------|------------------|--------------------------|

| | |
|---------------|--|
| 8.2.3. | Environmental exposure controls |
|---------------|--|

| | |
|---|---------------|
| Substance/mixture related measures to prevent exposure: | See Section 6 |
|---|---------------|

| | |
|--|-----------------------|
| Structural measures to prevent exposure: | Use modern equipment. |
|--|-----------------------|

| | |
|--|---|
| Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
|--|---|

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | |
|---|---------------|
| Technical measures to prevent exposure: | See Section 6 |
|---|---------------|

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | Value | Method |
|---|----------------------------------|--------------------------|
| Physical state: | liquid | No information available |
| Colour: | pale yellow | No information available |
| Odour/odour threshold: | neutral/no information available | No information available |
| Melting point / freezing point: | No information available | No information available |
| Boiling point or initial boiling point and boiling range: | No information available | No information available |
| Flammability: | No information available | No information available |
| Lower and upper explosion limit: | No information available | No information available |
| Flash point: | No information available | No information available |
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | No information available | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |

9.2. Other information

| | | |
|---|--|--|
| - | | |
|---|--|--|

SECTION 10 STABILITY AND REACTIVITY

| | | |
|-------|-------------------------------------|--|
| 10.1. | Reactivity: | See subsections 10.3 through 10.5. |
| 10.2. | Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3. | Possibility of hazardous reactions: | With strong oxidants, sodium-hydroxide, sulfuric acid, aluminum. |
| 10.4. | Conditions to avoid: | Sources of heat, sparks, and ignition. |
| 10.5. | Incompatible materials: | Aluminum. |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
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| | | |
|-------|-----------------------------------|---------------------------|
| 10.6. | Hazardous decomposition products: | No information available. |
|-------|-----------------------------------|---------------------------|

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity:

| Route of exposure: | Method | Species | Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
|----------------------|--------------------------|---------|---|---------------|---------|
| Oral exposure: | No information available | - | LD ₅₀ | - | - |
| Dermal exposure: | No information available | - | LD ₅₀ | - | - |
| Inhalation exposure: | No information available | - | LC ₅₀ | - | - |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|----------------------|--------------------------|--------------------------|------|
| Oral exposure: | No information available | No information available | - |
| Dermal exposure: | No information available | No information available | - |
| Inhalation exposure: | No information available | No information available | - |

Respiratory irritation: No information available

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|------------------|---------------|---------|------------|--------|------|
| Skin irritation: | - | rabbit | - | - | - |
| Eye irritation: | - | rabbit | - | - | - |

Sensitization

| | |
|----------------------|--------------------------|
| Dermal exposure: | No information available |
| Inhalation exposure: | No information available |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------------|--|
| Oral exposure: | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
|----------------|--|

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| | |
|----------------------|---|
| Dermal exposure: | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin. |
| Inhalation exposure: | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea. |
| Eye exposure: | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation. |

| | | | | | | |
|--|--|--|--|--|--|--|
| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
|--|--|--|--|--|--|--|

| | Dose | Exposure time | Species | Method | Evaluation | Note |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

| | | | |
|---|--|--|--|
| Specific target organ toxicity – repeated exposure (STOT RE): | | | |
|---|--|--|--|

| | Specific effects | Target organ | Note |
|---------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | - |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| | | | |
|-----------------------|--------------------------|--------------------------|---|
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |

| | |
|--|---|
| CMR effects (carcinogenicity, mutagenicity, reproductive toxicity) | |
| Carcinogenicity: | Current studies on test animals did not indicate carcinogenic effects. |
| Mutagenicity <i>in-vitro</i> : | Current <i>in vitro</i> tests did not indicate mutagenic effects. |
| Genotoxicity: | No information available |
| Mutagenicity <i>in-vivo</i> : | Current <i>in vivo</i> tests did not indicate mutagenic effects. |
| Germ cell mutagenicity: | No information available |
| Reproductive toxicity: | No toxicity on reproductive organs was determined in reproductive organs. |

| | |
|--|---|
| Summary of evaluation of the CMR properties: | - |
|--|---|

11.2 Information on other hazards:

11.2.1. Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other informations:

-

SECTION 12 ECOLOGICAL INFORMATION:

12.1. Toxicity

| Acute toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|----------------|------|---------------|---------|--------|------------|------|
|----------------|------|---------------|---------|--------|------------|------|

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| | | | | | | |
|-------------------------|------------------|----------------------|--------------------------|--------------------------|--------------------------|-------------|
| Fish | LC ₅₀ | 96 hours | - | No information available | - | - |
| Crustacea: | EC ₅₀ | 48 hours | - | No information available | - | - |
| Algae/aquatic plants | IC ₅₀ | 8 days | - | No information available | - | - |
| Microorganisms | LC ₅₀ | 72 hours | - | - | - | - |
| Chronic toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |

12.2. Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |
| | | | | |

12.3. Bioaccumulative potential

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| Partition coefficient: n-octanol/water (log Kow): | | | | | | |
|---|--------------------------|----|----|--------------------------|--------------------------|------|
| Value | Concentration | pH | °C | Method | Evaluation | Note |
| - | No information available | - | - | No information available | No information available | - |

| Bioconcentration factor (BCF) | | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| Value | Species | Method | Evaluation | Note | |
| No information available | No information available | No information available | No information available | No information available | |

| Chronic ecotoxicity | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4. Mobility in soil

Known or predicted distribution in environmental compartments:
 No information available

| Surface tension: | | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|------|--|
| Value | °C | Concentration | Method | Note | |
| No information available | No information available | No information available | No information available | - | |

| Adsorption / desorption | | | | | |
|-------------------------|-------------------------------------|---------|------------------|--------|------|
| Transport | A/D coefficient Henry's constant | log Kow | Evaporation rate | Method | Note |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| | | | | | | |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| Soil-water | No information available | No information available | No information available | No information available | No information available | - |
| Water-air | No information available | No information available | No information available | No information available | No information available | - |
| Soil-air | No information available | No information available | No information available | No information available | No information available | - |

12.5. Results of PBT and vPvB assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.6. Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7. Other adverse effects

No information available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal:

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

13.1.2. Waste codes/waste designations according to Law:

No information available

13.1.3. Waste treatment – relevant information:

No information available

13.1.4. Sewage disposal – relevant information:

Waste must not be disposed of into the sewage system.

13.1.5. Other disposal recommendations:

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur.

| | |
|---------|--------------------------------|
| 13.1.6. | Relevant Community provisions: |
| | - |

SECTION 14 TRANSPORT INFORMATION

Transporting/shipment by road (ADR)

| | |
|-------------------------------|---------------------------------------|
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by rail (RID)

| | |
|-------------------------------|---------------------------------------|
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Inland waterway transport (ADN)

| | |
|-------------------------------|---------------------------------------|
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

Transporting/shipment by sea (IMDG)

| | |
|-------------------------------|---------------------------------------|
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

| | |
|---|---|
| Transporting/shipment by air (ICAO-TI/IATA-DGR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| | |
| Further information: | The product is not subject to classification. |

| SECTION 15 REGULATORY INFORMATION | |
|--|--|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| EU regulations | |
| Authorization and/or restrictions of use | |
| Authorizations: | - |
| Restrictions: | - |
| Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
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| | | |
|-------|----------------------------|---|
| | National legislation: | Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act |
| 15.2. | Chemical safety assessment | |
| | None | |

| SECTION 16 Other information | | |
|-------------------------------------|---|--|
| 16.1. | Indication of changes: | - |
| 16.2. | Abbreviations and acronyms: | ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (UK REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: | |
| | H314 | Causes severe skin burns and eye damage. |
| | H315 | Causes skin irritation. |
| | H319 | Causes serious eye irritation. |
| | H335 | May cause respiratory irritation. |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | ** "X" in the product code marks different volumes (different packagings of the product) We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet. |

| | | | | | |
|---------------|---------------------------------|----------------|-------------|----------|---|
| Trading name: | FERRI REAGENT, WEIGERT B | | | | |
| Product code: | FR-OT-X** | Revision date: | 21 Dec 2022 | Version: | 5 |

ANNEX:
EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT


-

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: 6 |

| SECTION 1. Identification of the substance/mixture and of the company/undertaking | | |
|--|---|--|
| 1.1. | Product identifier | |
| | Trade name: | HEMATOXYLIN, WEIGERT A |
| | Chemical name: | - |
| | Catalogue number: | HEMA-OT-X** |
| 1.2. | Relevant identified uses of the substance or mixture and uses advised against | |
| | Uses: | For use in special staining kits. |
| | Uses advised against: | Only the identified uses are advised. |
| | Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3. | Details of the supplier of the safety data sheet | |
| | Supplier: | BioGnost Ltd. |
| | Address: | Medjugorska 59, Zagreb |
| | Telephone number: | +385 1 2409997 |
| | Telefax: | +385 1 2404039 |
| | e-mail of competent person: | msds@biognost.hr |
| | National contact: | - |
| 1.4. | Emergency telephone number | |
| | National Protection and Rescue Directorate: | 112 |
| | Medical information: | +385 1 2348 342 |
| | Other information: | - |

| SECTION 2. Hazards identification | | |
|--|--|------------------------|
| 2.1. | Classification of the substance or mixture | |
| 2.1.1. | Classification according to Regulation (EC) No 1272/2008 (CLP) | |
| | Hazard class and category code: | Hazard statements*: |
| | Flam. Liq. 2 | H225 |
| 2.1.2. | Additional information | |
| | - | |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 | | |
| 2.2. | Label elements | |
| | Product identification: | HEMATOXYLIN, WEIGERT A |
| | Identification number: | - |
| | Authorisation number: | - |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: | 6 |

| | |
|--------------------------------------|---|
| Hazard pictograms: |  GHS02 |
| Signal word: | Danger |
| Hazard statements: | H225 Highly flammable liquid and vapor. |
| Precautionary statement: | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection. |
| Supplemental hazard information (EU) | - |

| | |
|------|---|
| 2.3. | Other hazards |
| | <p>Endocrine Disrupting Properties: No known endocrine disrupting properties</p> <p>Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.</p> |

SECTION 3. Composition/information on ingredients

| CAS/ EC/ Index number | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|---|-----------------------------|--------------------------------|---------------------|--|
| 107-21-1/ 203-473-3/ 603-027-00-1 | 01-2119456816- 28-xxxx | 1- 10 % | ethylene glycol | Acute Tox. 4, H302 |
| 64-17-5/ 200-578-6/ 603-002-00-5 | 01-2119457610- 43-0147 | 60 – 80 % | ethanol | Flam. Liq. 2, H225 |

SECTION 4. First aid measures

| | |
|-------------------------|---|
| 4.1. | Description of first aid measures |
| General notes: | If the suggested first aid measures do not prove sufficient, seek medical attention. |
| Following inhalation: | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen. |
| Following skin contact: | Remove contaminated clothing. Thoroughly wash with water for 15 minutes. |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: | 6 |

| | |
|------------------------------------|---|
| Following eye contact: | Rinse the eyes using mild jet of clean water for at least 15 minutes with the eyelids held wide open. |
| Following ingestion: | Rinse the mouth thoroughly with water. If the afflicted person is conscious, provide them with large amounts of water. Consult a physician. |
| Self-protection of the first aider | - |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------|---|
| Following inhalation: | May cause eye irritation and upper respiratory system (stinging sensation, irritation). Bronchoconstriction is possible. Possible symptoms include CNS symptoms such as headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. |
| Following skin contact: | Defatting, dry skin. |
| Following eye contact: | Splatter may cause discomfort, stinging sensation, conjunctival redness, corneal surface lesions. |
| Following ingestion: | It may lead to occurrence of strong sensation of stinging, headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. If denaturants are present, dyspepsia may occur (such as vomiting). |

4.3. Indication of any immediate medical attention and special treatment needed

| |
|--------------------------|
| No information available |
|--------------------------|

SECTION 5. Firefighting measures

5.1. Extinguishing media

| | |
|---------------------------------|---|
| Suitable extinguishing media: | Small fire - water spray, dry powder, alcohol-resistant foam, CO ₂ Large fire - water spray or alcohol-resistant foam |
| Unsuitable extinguishing media: | Water jet |

5.2. Special hazards arising from the substance or mixture

| | |
|--------------------------------|---------------------------------------|
| Hazardous combustion products: | Incomplete combustion of the product. |
|--------------------------------|---------------------------------------|

5.3. Advice for firefighters

| |
|--|
| Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. |
|--|

5.4. Additional information

| |
|---|
| - |
|---|

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| |
|------------------------------------|
| 6.1.1. For non-emergency personnel |
|------------------------------------|

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: 6 |

| | | |
|--------|---|---|
| | Protective equipment: | When disposing of small quantities use protective clothing. When disposing of large quantities use self-contained open-circuit compressed air breathing apparatus or self-contained closed-circuit air breathing apparatus. |
| | Accident prevention methods: | Secure a safety zone, remove all ignition sources, and in case of an accident inform the Emergency service (112) and the manufacturer or sender. Position a prohibition sign with symbols of flame and devices that cause sparks. |
| | Emergency procedures: | Remove or neutralize all factors that may exacerbate the condition, use all allowed means of containing the situation and use recommended means of personal protection. |
| 6.1.2. | For emergency responders: | |
| | Self-contained open-circuit compressed air breathing apparatus, a set for protecting the body from heat dissipation (fireproof clothing). | |
| 6.2. | Environmental precautions: | |
| | Use sand protective barrier to prevent further spillage of chemicals. Prevent environmental pollution by not allowing the chemicals to enter the sewage system, surface water or groundwater. | |
| 6.3. | Methods and material for containment and cleaning up | |
| 6.3.1. | Bunding, covering of drains; capping procedures: | Sand protective barrier or barriers made of similar materials |
| 6.3.2. | Cleaning up: | Sawdust, sand, mineral adsorbents |
| 6.3.3. | Other information: | Secure proper ventilation. Contact the responsible person; in case of larger spills and possible environmental pollution contact National Protection and Rescue (112). |
| 6.4. | Reference to other sections | |
| | - | |

| SECTION 7. Handling and storage | | |
|--|--|--|
| 7.1. | Precautions for safe handling | |
| 7.1.1. | Protection measures | |
| | Measures to prevent fire: | Keep away from sources of ignition and heat. Do not use tools that cause sparks. |
| | Measures to prevent aerosol and dust generation: | Secure proper ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | - |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: 6 |

| | |
|--|---|
| 7.2. Conditions for safe storage, including any incompatibilities | |
| Technical measures and storage conditions: | Keep in a well-ventilated place. Keep away from heat and direct solar radiation. |
| Packaging materials: | Manufacturer's original packaging. |
| Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| Further information on storage conditions: | - |
| 7.3. Specific end use(s) | |
| Recommendations: | - |
| Industrial sector specific solutions: | - |

SECTION 8. Exposure controls/personal protection

| 8.1. Control parameters | | | | |
|--------------------------------|----------|--|-------------------|-------------------------|
| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
| | | ppm | mg/m ³ | |
| Ethanol | 64-17-5 | 1000/- | 1900/- | - |
| Ethylene glycol | 107-21-1 | 20/40 | 52/104 | - |
| Substance: - | | | | |
| EC No: | - | CAS No: | - | |

DNEL

| Industrial | | | | |
|--------------------|----------------------------------|-----------------------|----------------------------|--|
| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
| Oral | - | - | - | - |
| Inhalation | 1900 mg/m ³ (ethanol) | - | 35 mg/kg (ethylene glycol) | 380 mg/m ³ (ethanol) |
| Dermal | - | - | - | 343 mg/kg (ethanol) 106 mg/kg (ethylene glycol) |

Critical physical parameters: solubility, flammability, corrosivity:

Consumer

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: 6 |

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|---------------------------------|-----------------------|---------------------------|---|
| Oral | - | - | - | - |
| Inhalation | 950 mg/m ³ (ethanol) | - | 7 mg/kg (ethylene glycol) | 114 mg/m ³ (ethanol) |
| Dermal | - | - | - | 206 mg/kg (ethanol) 53 mg/kg (ethylene glycol) |

| PNEC | |
|------------------------------------|--|
| Environmental protection target | PNEC |
| Fresh water | 0.96 mg/l (ethanol) 10 mg/l (ethylene glycol) |
| Freshwater sediments | 3.6 mg/kg (ethanol) 37 mg/kg (ethylene glycol) |
| Marine water | 0.79 mg/l (ethanol) 1 mg/l (ethylene glycol) |
| Marine sediments | 2.9 mg/kg (ethanol) 3.7 mg/kg (ethylene glycol) |
| Food chain | 380-720 mg/kg (ethanol) |
| Microorganisms in sewage treatment | 580 mg/l (ethanol) 199.5 mg/l (ethylene glycol) |
| Soil (agricultural) | 0.63 mg/kg (ethanol) 1.53 mg/kg (ethylene glycol) |
| Air | no information available |

| | | |
|--------|--|---|
| 8.2. | Exposure controls | |
| 8.2.1. | Engineering measures | |
| | Substance/mixture related measures to prevent exposure during identified uses: | Use personal protective equipment. Do not eat, drink or smoke in the workspace. |
| | Structural measures to prevent exposure: | No information available |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | See Section 7.2 |
| 8.2.2. | Personal protection equipment | |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | | |
|----------|---|---|
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (EN166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air. |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥ 0.50 mm Break through time: > 480 min |
| | Other skin protection: | During everyday work use cotton clothing and suitable footwear, such as rubber boots or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point $> 65^{\circ}\text{C}$) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards: | No information available |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

SECTION 9. Physical and chemical properties

| | | | |
|------|---|---------------------------------------|--------------------------|
| 9.1. | Information on basic physical and chemical properties | | |
| | | Value | Method |
| | Physical state: | liquid | No information available |
| | Colour: | brown | No information available |
| | Odour/odour threshold: | ethanol like/no information available | No information available |
| | Melting point / freezing point: | No information available | No information available |
| | Boiling point or initial boiling point and boiling range: | No information available | No information available |
| | Flammability: | No information available | No information available |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | | |
|--|--------------------------|--------------------------|
| Lower and upper explosion limit: | No information available | No information available |
| Flash point: | 20°C | No information available |
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | No information available | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |

| | |
|------|-------------------|
| 9.2. | Other information |
| | - |

SECTION 10.: Stability and reactivity

| | | |
|-------|-------------------------------------|---|
| 10.1. | Reactivity: | The product is stable under normal working and storage conditions. |
| 10.2. | Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using (room temperature). |
| 10.3. | Possibility of hazardous reactions: | Risk of explosion after contact with strong acids, alkali metals, alkali metal oxides, nitric acid, oxidizing substances. |
| 10.4. | Conditions to avoid: | High temperatures, ignition sources, open flame. |
| 10.5. | Incompatible materials: | Oxidants, acids, alkali metals. |
| 10.6. | Hazardous decomposition products: | Non-degradable if used in the described manner. |

SECTION 11. Toxicological information

| | |
|-------|--|
| 11.1. | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
|-------|--|

| Acute toxicity: | | | | | |
|--------------------|--------------------------|---------|---|---------------|--|
| Route of exposure: | Method | Species | Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
| Oral: | No information available | rat | LD ₅₀ | - | 7.060 mg/kg (ethanol) 7.712 mg/kg (ethylene glycol) |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
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| | | | | | |
|-------------|--------------------------|--------|------------------|---------------|--|
| Dermal: | No information available | rabbit | LD ₅₀ | - | >20.000 mg/kg (ethanol) >3.500mg/kg (ethylene glycol) |
| Inhalation: | No information available | rat | LC ₅₀ | 4 h (ethanol) | >8.000 mg/l (ethanol) |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|-------------|--------------------------|--------------------------|------|
| Oral: | No information available | No information available | - |
| Dermal: | No information available | No information available | - |
| Inhalation: | No information available | No information available | - |

Aspiration hazard: No information available

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|-------------------------------|---------------|---------|------------|--------|--------------------------|
| Skin corrosion/irritation: | - | - | - | - | No information available |
| Serious eye damage/irritation | - | - | - | - | No information available |

Sensitization:

| | |
|----------------------------|--------------------------|
| Skin sensitization: | No information available |
| Respiratory sensitization: | No information available |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------------------|---|
| Oral exposure: | It may lead to occurrence of strong sensation of stinging, headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. If denaturants are present, dyspepsia may occur (such as vomiting). |
| Dermal exposure: | Defatting, dry skin. |
| Inhalation exposure: | May cause eye irritation and upper respiratory system (stinging sensation, irritation). Bronchoconstriction is possible. Possible symptoms include CNS symptoms such as headache, vertigo, intoxication and loss of consciousness after exposure to higher levels of concentration. |
| Eye exposure: | Splatter may cause discomfort, stinging sensation, conjunctival redness, corneal surface lesions. |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
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| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Dose | Exposure time | Species | Method | Evaluation | Note |
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

| Specific target organ toxicity – repeated exposure (STOT RE): | | | |
|---|--------------------------|--------------------------|------|
| | Specific effects | Target organ | Note |
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
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| | | | |
|--|--------------------------|--------------------------|---|
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |
| CMR effects (carcinogenicity; mutagenicity; reproductive toxicity) | | | |
| Carcinogenicity: | No information available | | |
| Mutagenicity <i>in-vitro</i> : | No information available | | |
| Genotoxicity: | No information available | | |
| Mutagenicity <i>in-vivo</i> : | No information available | | |
| Germ cell mutagenicity: | No information available | | |
| Reproductive toxicity: | No information available | | |
| Summary of evaluation of the CMR properties: | - | | |
| 11.2. Information on other hazards: | | | |
| 11.2.1. Endocrine disrupting properties: | | | |
| No known endocrine disrupting properties that affect human health. | | | |
| 11.2.2. Other informations: | | | |
| - | | | |

| SECTION 12. Ecological information: | | | | | | |
|--|------------------|---------------|--------------------------|--------------------------|---|------|
| 12.1. Toxicity | | | | | | |
| Acute (short-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | Fish | No information available | 8.140 mg/l (ethanol) 72.860 mg/l (ethylene glycol) | - |
| Crustacea: | EC ₅₀ | 48 hours | water flea | No information available | 7.800 mg/l (ethanol) > 100 mg/l (ethylene glycol) | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | algae | No information available | 5.000 mg/l (ethanol) 6.500-13.000 mg/l (ethylene glycol) | - |
| Microorganisms | - | - | No information available | No information available | No information available | - |

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
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| Chronic (long-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|------------------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Microorganisms | - | - | - | - | - | - |

12.2. Persistence and degradability

| | | | | | |
|---------------------|--------------------------|--------------------------|--|--------------------------|------|
| Abiotic degradation | | | | | |
| | Degradation half-lives | Method | | Evaluation | Note |
| Marine water | No information available | No information available | | No information available | - |
| Fresh water | No information available | No information available | | No information available | - |
| Air | No information available | No information available | | No information available | - |
| Soil | No information available | No information available | | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|---------------|-------------|--------|------------|------|
| - | - | - | - | - |
| | | | | |
| | | | | |

12.3. Bioaccumulative potential

| Partition coefficient: n-octanol/water (log Kow): | | | | | | |
|---|---------------|----|----|--------|------------|------|
| Value | Concentration | pH | °C | Method | Evaluation | Note |
| - | - | - | - | - | - | - |
| | | | | | | |

Bioconcentration factor (BCF)

| Value | Species | Method | Evaluation | Note |
|-------|---------|--------|------------|------|
|-------|---------|--------|------------|------|

| | | | | | |
|---------------|-------------------------------|----------------------|-------------|----------|---|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | | |
| Product code: | HEMA-OT-X** | Date of compilation: | 19 Dec 2023 | Version: | 6 |

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

| Chronic ecotoxicity | | | | | | |
|---|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (Daphnia) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

| 12.4. Mobility in soil | | | | | | |
|--|--------------------------|--------------------------|--------------------------|------|--|--|
| Known or predicted distribution in environmental compartments: | | | | | | |
| No information available | | | | | | |
| Surface tension: | | | | | | |
| Value | °C | Concentration | Method | Note | | |
| No information available | No information available | No information available | No information available | - | | |

| Adsorption / desorption | | | | | | |
|-------------------------|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | No information available | No information available | No information available | No information available | - |
| Water-air | No information available | No information available | No information available | No information available | No information available | - |
| Soil-air | No information available | No information available | No information available | No information available | No information available | - |

| 12.5. Results of PBT and vPvB assessment | |
|--|--|
| This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. | |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | |
|---|---|
| 12.6. Endocrine disrupting properties | |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| 12.7. Other adverse effects | |
| | No adverse effects are expected. |
| SECTION 13. Disposal considerations | |
| 13.1. Waste treatment methods | |
| 13.1.1. Product/Packaging disposal: | |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |
| 13.1.2. Waste codes/waste designations according to Law: | |
| | No information available |
| 13.1.3. Waste treatment – relevant information: | |
| | No information available |
| 13.1.4. Sewage disposal – relevant information: | |
| | Waste must not be disposed of into the sewage system. |
| 13.1.5. Other disposal recommendations: | |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |
| 13.1.6. Relevant Community provisions: | |
| | - |
| SECTION 14. Transport information | |
| Transporting/shipment by road (ADR) | |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
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| | |
|-------------------------------|--------------------------|
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |

Transporting/shipment by rail (RID)

| | |
|-------------------------------|--------------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |

Transporting/shipment by inland waterways (ADN)

| | |
|-------------------------------|--------------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |

Transporting/shipment by sea (IMDG)

| | |
|---|--------------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: | - |

Transporting/shipment by air (ICAO-TI/IATA-DGR)

| | |
|-------------------------------|--------------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |

| | |
|----------------------|---|
| Further information: | - |
|----------------------|---|

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
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| SECTION 15. Regulatory information | |
|--|--|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| EU regulations | |
| Authorization and/or restrictions of use | |
| Authorizations: | - |
| Restrictions: | - |
| Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |
| National legislation: | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Transport of Hazardous Substances Act</p> |
| 15.2. | Chemical safety assessment |
| | None |

| SECTION 16. Other information | |
|--------------------------------------|--------------------------|
| 16.1. | Indication of changes: - |

| | | | | |
|---------------|-------------------------------|----------------------|-------------|------------|
| Trade name: | HEMATOXYLIN, WEIGERT A | | | |
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| | | | |
|-------|---|------------|--|
| 16.2. | Abbreviations and acronyms: | and | ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) DNEL: Derived No-Effect Level (UK REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative |
| 16.3. | Key literature references and source of data: | | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | | |
| | Classification | | Classification procedure |
| | - | | - |
| 16.5. | Relevant H statements (number and full text) | | |
| | H: | 225 302 | Highly flammable liquid and vapor. Harmful if swallowed. |
| 16.6. | Training advice: | | - |
| 16.7. | Further information: | | ** "X" in the product code marks different volumes (different packaging of the product) We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet. |


| | |
|--|--|
| ANNEX: | |
| EXPOSURE SCENARIO RESULTING TO CHEMICAL SAFETY ASSESSMENT | |
| - | |

| | | | |
|---------------|---------------------------------|----------------------|-------------|
| Trade name: | MARTIUS YELLOW, SOLUTION | | |
| Product code: | MAY-OT-X** | Date of compilation: | 14 Nov 2022 |
| | | Version: | 3 |

| SECTION 1: Identification of the substance/mixture and of the company/undertaking | | |
|--|---|--|
| 1.1. | Product identifier | |
| | Trade name: | MARTIUS YELLOW, SOLUTION |
| | Chemical name: | - |
| | Catalogue number: | MAY-OT-X** |
| 1.2. | Relevant identified uses of the substance or mixture and uses advised against | |
| | Uses: | For use with Martius Scarlet Blue kit. |
| | Uses advised against: | Only the identified uses are advised. |
| | Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes. |
| 1.3. | Details of the supplier of the safety data sheet | |
| | Supplier: | BioGnost Ltd. |
| | Address: | Medjugorska 59, Zagreb |
| | Telephone number: | +385 1 2409997 |
| | Telefax: | +385 1 2404039 |
| | E-mail of competent person: | msds@biognost.hr |
| | National contact: | - |
| 1.4. | Emergency telephone numbers | |
| | National Protection and Rescue Directorate: | 112 |
| | Medical information: | +385 1 2348 342 |
| | Other information: | - |

| SECTION 2. Hazards identification | | |
|---|---|--------------------------|
| 2.1. | Classification of the substance or mixture | |
| 2.1.1. | Classification according to Regulation (EC) No. 1272/2008 (CLP) | |
| | Hazard class and category code: | Hazard statement*: |
| | Flam. Liq. 2 | H225 |
| 2.1.2. | Additional information | |
| | - | |
| *For full text of Hazard- and EU Hazard-statements: see Section 16. | | |
| 2.2. | Label elements | |
| | Product identification: | MARTIUS YELLOW, SOLUTION |
| | Identification number: | - |

| | | | |
|---------------|---------------------------------|----------------------|-------------|
| Trade name: | MARTIUS YELLOW, SOLUTION | | |
| Product code: | MAY-OT-X** | Date of compilation: | 14 Nov 2022 |
| | | Version: | 3 |

| | |
|---------------------------------------|---|
| Authorisation number: | - |
| Hazard pictograms: |  GHS02 |
| Signal word: | Danger |
| Warning statement: | H225 Highly flammable liquid and vapor. |
| Precautionary statement: | P210 Keep away from heat/sparks/open flames/hot surfaces. - Do not smoke. P233 Keep container tightly closed. P280 Wear protective gloves/protective clothing/eye/protection/face protection. |
| Supplemental hazard information (EU): | - |

| | |
|------|---|
| 2.3. | Other hazards |
| | <p>Endocrine Disrupting Properties: No known endocrine disrupting properties</p> <p>Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.</p> |

| SECTION 3. Composition/information on ingredients | | | | |
|--|-----------------------|-----------------------------|------------------------|--|
| CAS/EC/ Index number | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
| 64-17-5/ 200-578-6/ 603-002-00-5 | 01-2119457610-43-0147 | 80 - 100 % | ethanol | Flam. Liq. 2; H225 |
| 605-69-6/ 210-093-1/ - | - | ≤ 10 % | 2,4-dinitro-1-naphthol | Skin. Irr. 2; H315 Eye Irr. 2; H319 STOT SE 3; H335 |

| SECTION 4. First aid measures | |
|--------------------------------------|---|
| 4.1. | Description of first aid measures |
| General notes: | If the suggested first aid measures do not prove sufficient, seek medical attention. |
| Following inhalation: | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. In case of difficult breathing, provide the afflicted person with oxygen. |

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| Following skin contact: | Remove all contaminated clothes/footwear. Thoroughly wash with water for at least 15 minutes. |
| Following eye contact: | Rinse the eyes using mild jet of clean water for at least 20 minutes with the eyelids held wide open. |
| Following swallowing: | Rinse the mouth thoroughly with 1-2 glasses of water. Immediately consult a physician and show the container or label. In case of swallowing large quantities, transport the afflicted person to the hospital. |
| Self-protection of the first aider | - |

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-------------------------|---|
| Following inhalation: | Depending on concentration and exposure time, it may lead to mucosa irritation, cough, and dyspnea. |
| Following skin contact: | Depending on concentration and exposure time, it may lead to irritation, rash, skin drying and skin cracking. |
| Following eye contact: | Depending on concentration and exposure time, it may lead to irritation, tearing, redness and pain. |
| Following swallowing: | Depending on concentration and exposure time, it may lead to stinging and digestive mucus damage, abdominal pain, nausea, vomiting. |

4.3. Indication of any immediate medical attention and special treatment needed

| |
|--------------------------|
| No information available |
|--------------------------|

SECTION 5. Firefighting measures

5.1. Extinguishing media

| | |
|---------------------------------|---|
| Suitable extinguishing media: | Small fire - water spray, dry powder, alcohol-resistant foam, CO2 Large fire - water spray or alcohol-resistant foam |
| Unsuitable extinguishing media: | Water with full jet |

5.2. Special hazards arising from the substance or mixture

| | |
|-------------------------------|---------------------------------------|
| Hazardous byproducts of fire: | Incomplete combustion of the product. |
|-------------------------------|---------------------------------------|

5.3. Advice for firefighters

| |
|--|
| Stay in danger area only with self-contained open-circuit compressed air breathing apparatus and a set for protecting the body from heat dissipation (fireproof clothing). |
|--|

5.4. Additional information

| |
|---|
| Cool endangered receptacles with water spray. Collect contaminated fire fighting water separately. Do not contaminate the environment with extinguishing media. |
|---|

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. Avoid breathing vapors and avoid contact with skin and eyes. Do not smoke. Keep away from ignition sources. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Self-contained open-circuit compressed air breathing apparatus, a set for protecting the body from heat dissipation (fireproof clothing). | |
| 6.2. | Environmental precautions: | |
| | Use sand protective barrier to prevent further spillage of chemicals. Prevent environmental pollution by not allowing the chemicals to enter the sewage system, surface water or groundwater. | |
| 6.3. | Methods and materials for containment and cleaning up | |
| 6.3.1. | Bundling, covering of drains; capping procedures: | Sand protective barrier or barriers made of similar materials |
| 6.3.2. | Cleaning up: | Sawdust, sand, mineral adsorbents |
| 6.3.3. | Other information: | Secure proper ventilation. Contact the responsible person; in case of larger spills and possible environmental pollution contact National Protection and Rescue (112). Do not use incompatible materials (see Section 10). |
| 6.4. | Reference to other sections | |
| | See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information. | |

| SECTION 7. Handling and storage | | |
|---------------------------------|--|--|
| 7.1. | Precautions for safe handling | |
| 7.1.1. | Protection measures | |
| | Measures to prevent fire: | Use in well ventilated storage rooms. Keep away from sources of ignition and heat. Do not use tools that cause sparks. Do not smoke. |
| | Measures to prevent aerosol and dust generation: | Secure proper ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | Protect against electrostatic charges. |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |

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| 7.2. Conditions for safe storage, including any incompatibilities | |
| Technical measures and storage conditions: | Keep in tightly closed and upright set containers in a well ventilated storage rooms at temperatures ranging from 15 to 25 °C. Protect from heat and direct sunlight. |
| Packaging materials: | Manufacturer's original packaging. |
| Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 10). |
| 7.3. Specific end use(s) | |
| Recommendations: | - |
| Industrial sector specific solutions: | - |

| SECTION 8. Exposure controls/personal protection | | | | |
|--|----------------------------------|--|----------------------|---------------------------------|
| 8.1. Control parameters | | | | |
| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
| | | ppm | mg/m ³ | |
| Ethanol | 64-17-5 | 1000/- | 1900/- | No information available |
| Substance: | - | | | |
| EC No: | - | CAS No: | - | |
| DNEL | | | | |
| Industrial | | | | |
| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
| Oral | - | - | - | - |
| Inhalation | 1900 mg/m ³ (ethanol) | - | - | 380 mg/m ³ (ethanol) |
| Dermal | - | - | - | 343 mg/kg (ethanol) |
| Critical physical parameters: solubility, flammability, corrosivity: | | - | | |
| Consumer | | | | |
| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |

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|------------|------------------------------------|---|---|---------------------------------|
| Oral | - | - | - | 87 mg/kg bw/day (ethanol) |
| Inhalation | 950 mg/m ³ (ethanol) | - | - | 114 mg/m ³ (ethanol) |
| Dermal | - | - | - | 206 mg/kg (ethanol) |

| PNEC | |
|------------------------------------|--------------------------|
| Environmental protection target | PNEC |
| Fresh water | 0.96 mg/l (ethanol) |
| Freshwater sediments | 3.6 mg/kg (ethanol) |
| Marine water | 0.79 mg/l (ethanol) |
| Marine sediments | 2.9 mg/kg (ethanol) |
| Food chain | 380-720 mg/kg (ethanol) |
| Microorganisms in sewage treatment | 580 mg/l (ethanol) |
| Soil (agricultural) | 0.63 mg/kg (ethanol) |
| Air | no information available |

| | | |
|----------|--|--|
| 8.2. | Exposure controls | |
| 8.2.1. | Appropriate engineering controls | |
| | Substance/mixture related measures to prevent exposure during identified uses: | Do not eat, drink or smoke in the workspace. Use personal protective equipment. |
| | Structural measures to prevent exposure: | No information available |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | See Section 7.2 |
| 8.2.2. | Personal protection equipment | |
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (EN 166) or visor in case of lower levels of concentration in air; protective gas mask that covers the entire face in case of higher levels of concentration in air. |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min |

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| | Other skin protection: | During everyday work use cotton clothing (EN 340) and suitable footwear, such as rubber boots (EN 20345) or shoes that cover the entire foot. In case of spilling hazard, use clothing made of impermeable material suitable for protection from liquid chemicals (Viton, PVC, himex) and footwear made from the same material. |
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards: | No information available |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--|---|---------------------------------------|--------------------------|
| 9.1. Information on basic physical and chemical properties | | | |
| | | Value | Method |
| | Physical state: | liquid | no information available |
| | Colour: | yellow | no information available |
| | Odour/odour threshold: | ethanol like/no information available | no information available |
| | Melting point / freezing point: | no information available | no information available |
| | Boiling point or initial boiling point and boiling range: | no information available | no information available |
| | Flammability: | no information available | no information available |
| | Lower and upper explosion limit: | no information available | no information available |
| | Flash point: | 15 °C | no information available |
| | Auto-ignition temperature: | no information available | no information available |
| | Decomposition temperature: | no information available | no information available |
| | pH: | 1.0 – 2.0 | no information available |
| | Kinematic viscosity: | no information available | no information available |
| | Solubility: | no information available | no information available |
| | Partition coefficient n-octanol/water (log value): | no information available | no information available |
| | Vapour pressure: | No information available | no information available |

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|----------------------------------|--------------------------|--------------------------|
| Density and/or relative density: | no information available | no information available |
| Relative vapour density: | no information available | no information available |
| Particle characteristics: | no information available | no information available |
| 9.2. Other information | | |
| - | | |

| SECTION 10.: Stability and reactivity | | |
|--|---|--|
| 10.1. Reactivity: | The product is stable under normal working and storage conditions. | |
| 10.2. Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using. | |
| 10.3. Possibility of hazardous reactions: | Risk of explosion after contact with strong acids, alkali metals, alkali metal oxides, nitric acid, oxidizing substances. | |
| 10.4. Conditions to avoid: | Avoid heat, sparks, open flames and other ignition sources. | |
| 10.5. Incompatible materials: | Oxidants, acids, alkali metals. | |
| 10.6. Hazardous decomposition products: | Non-degradable if used in the described manner. | |

| SECTION 11. Toxicological information | | | | | |
|--|--------------------------|---------|---|---------------|-------------------------|
| 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 | | | | | |
| Acute toxicity: | | | | | |
| Route of exposure: | Method | Species | Effective Dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
| Oral: | - | rat | LD ₅₀ | - | 7.060 mg/kg (ethanol) |
| Dermal: | - | rabbit | LD ₅₀ | - | >20.000 mg/kg (ethanol) |
| Inhalation: | - | rat | LC ₅₀ | 4 h (ethanol) | >8.000 mg/l (ethanol) |
| Specific target organ toxicity - single exposure (STOT-SE): | | | | | |
| | Specific effects | | Target organ | | Note |
| Oral: | No information available | | No information available | | - |
| Dermal: | No information available | | No information available | | - |
| Inhalation: | No information available | | No information available | | - |
| Aspiration hazard: | | | | | |
| | No information available | | | | |

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| Irritation and corrosion | | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Exposure time | Species | Evaluation | Method | Note |
| Skin corrosion/irritation | No information available | No information available | No information available | No information available | - |
| Serious eye damage/irritation | No information available | No information available | No information available | No information available | - |

| Sensitization | |
|----------------------------|--------------------------|
| Skin sensitization: | No information available |
| Respiratory sensitization: | No information available |

| Symptoms related to the physical, chemical and toxicological characteristics | |
|--|--|
| Oral exposure: | Swallowing may cause irritation of mucosa, tingling sensation in the mouth, burning sensation; higher levels of concentration may cause nausea, abdominal pain and vomiting. In case of vomiting, aspiration causes coughing, difficult breathing. Higher levels of concentration may cause suffocation. |
| Dermal exposure: | Slight irritation. After short exposure, resorption effects are not likely. Long-term exposure may cause drying, cracking and tingling sensation of skin. |
| Inhalation exposure: | Inhalation of large amounts of vapors in inadequately ventilated perimeter may cause coughing, sneezing, headache and nausea. |
| Eye exposure: | Direct eye contact may cause slight to moderate irritation, lacrimation and burning sensation. |

| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Dose | Exposure time | Species | Method | Evaluation | Note |
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |

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| | | | | | | |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

Specific target organ toxicity - repeated exposure (STOT-RE):

| | Specific effects | Target organ | Note |
|-----------------------|--------------------------|--------------------------|------|
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |

CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)

| | |
|--------------------------------|--------------------------|
| Carcinogenicity: | No information available |
| Mutagenicity <i>in-vitro</i> : | No information available |
| Genotoxicity: | No information available |
| Mutagenicity <i>in-vivo</i> : | No information available |
| Germ cell mutagenicity: | No information available |
| Reproductive toxicity: | No information available |

Summary of evaluation of the CMR properties: No information available

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| 11.2. | Information on other hazards: |
| 11.2.1. | Endocrine disrupting properties: |
| | No known endocrine disrupting properties that affect human health. |
| 11.2.2. | Other informations: |
| | - |

SECTION 12. Ecological information

| 12.1. Toxicity | | | | | | |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Acute (short-term) toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | Fish | No information available | 8.140 mg/l (ethanol) | - |
| Crustacea: | EC ₅₀ | 48 hours | Daphnia magna | No information available | 7.800 mg/l (ethanol) | - |
| Algae/aquatic plants: | IC ₅₀ | 72 hours | algae | No information available | 5.000 mg/l (ethanol) | - |
| Other organisms | - | - | - | - | - | - |
| Chronic (long-term) toxicity | Doza | Exposure time | Species | Method | Evaluation | Note |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |
| 12.2. Persistence and degradability | | | | | | |
| Abiotic degradation | | | | | | |
| | Degradation half-lives | Method | Evaluation | Note | | |
| Marine water | No information available | No information available | No information available | - | | |

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| | | | | |
|-------------|--------------------------|--------------------------|--------------------------|---|
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|---------------|-------------|--------|------------|------|
| - | - | - | - | - |

12.3. Bioaccumulative potential

Octanol-water partition coefficient (log Kow)

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|---------------|----|----|--------|------------|------|
| - | - | - | - | - | - | - |

Bioconcentration Factor (BCF)

| Value | Species | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|------|
| No information available | No information available | No information available | No information available | - |

Chronic ecotoxicity

| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
|---|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (Daphnia) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4. Mobility in soil

Known or predicted distribution in environmental compartments:

No information available

| | | | | | |
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| | | | | | |
|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Surface tension: | | | | | |
| | Value | °C | Concentration | Method | Note |
| | No information available | No information available | No information available | No information available | - |
| | | | | | |
| | | | | | |

| | | | | | |
|-------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|------|
| Adsorption / desorption | | | | | |
| Transport | A/D coefficient Henry's constant | log Kow | Evaporation rate | Method | Note |
| Soil-Water | No information available | No information available | No information available | No information available | - |
| Water-Air | No information available | No information available | No information available | No information available | - |
| Soil-Air | No information available | No information available | No information available | No information available | - |

12.5. Results of PBT and vPvB assessment

Based on available data, the product does not contain any PBT or vPvB substances.

12.6. Endocrine disrupting properties

Based on available data, does not contain endocrine disruptors.

12.7. Other adverse effects

No adverse effects are expected.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal:

Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection.

13.1.2. Waste codes/waste designations according to Low:

Packaging that contains residual hazardous substances or is contaminated with hazardous substances

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| 13.1.3. | Waste treatment – relevant information: |
| | No information available |
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. |
| 13.1.6. | Relevant Community provisions: |
| | Disposal must be made according to official regulations. |

SECTION 14. Transport information

| | |
|---|--------------------------|
| Transporting/shipment by road (ADR) | |
| UN number | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Transporting/shipment by rail (RID) | |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Transporting/shipment by inland waterways (ADN) | |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Transporting/shipment by sea (IMDG) | |

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| | |
|--|--------------------------|
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC code: | - |
| Transporting/shipment by air (ICAO-TI/IATA-DGR) | |
| UN number: | 1170 |
| UN proper shipping name: | Ethanol solution |
| Transport hazard class(es): | 3 |
| Packing group: | II |
| Environmental hazards: | No information available |
| Special precautions for user: | - |
| Further information: | - |

| SECTION 15. Regulatory information | |
|---|--|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| EU regulations | |
| Authorisation and/or restrictions on use | |
| Authorisations: | - |
| Restrictions: | - |

| | | | |
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| Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |
| National legislation: | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2. Chemical safety assessment | None |

| SECTION 16. Other information | |
|--------------------------------------|---|
| 16.1. Indication of changes: | - |
| 16.2. Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |

| | | | |
|---------------|---------------------------------|----------------------|-------------|
| Trade name: | MARTIUS YELLOW, SOLUTION | | |
| Product code: | MAY-OT-X** | Date of compilation: | 14 Nov 2022 |
| | | Version: | 3 |

| | | |
|-------|---|--|
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: 225 | Highly flammable liquid and vapor. |
| | 315 | Causes skin irritation. |
| | 319 | Causes serious eye irritation. |
| | 335 | May cause respiratory irritation. |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | ** "X" in the product code marks different volumes (different packaging of the product) We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet. |

| |
|---|
| ANNEX: Exposure scenario resulting to Chemical safety assessment |
| - |

| | | | |
|---------------|--|----------------------|-------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 |
| | | Version: | 2 |

| SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | |
|---|---|
| 1.1. Product identifier | |
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION |
| Chemical name: | - |
| Catalogue number: | FVK1-OT-X** |
| 1.2. Relevant identified uses of the substance or mixture and uses advised against | |
| Uses: | For use with special staining kits. |
| Uses advised against: | Only the identified uses are advised. |
| Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3. Details of the supplier of the safety data sheet | |
| Supplier: | BioGnost Ltd. |
| Address: | Medjugorska 59, Zagreb |
| Telephone number: | +385 1 2409997 |
| Fax no.: | +385 1 2404039 |
| e-mail of competent person: | msds@biognost.hr |
| National contact: | - |
| 1.4. Emergency telephone number | |
| National Protection and Rescue Directorate: | 112 |
| Medical information: | +385 1 2348 342 |
| Other information: | - |

| SECTION 2 HAZARDS INFORMATION | |
|--|-----------------------------------|
| 2.1. Classification of the substance or mixture | |
| 2.1.1. Classification (REGULATION (EC) No. 1272/2008 (CLP)) | |
| Hazard class and category code: | Hazard statements*: |
| Not identified as hazardous substance. | - |
| 2.1.2. Additional information | |
| - | |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 | |
| 2.2. Classification according to EC Directive Nr. 1272/2008 CLP) | |
| Product identification: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION |
| Identification number: | - |
| Authorization no.: | - |
| Hazard pictograms: | - |

| | | | | |
|---------------|--|----------------------|-------------|------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 | Version: 2 |

| | |
|---------------------------|---|
| Signal word: | - |
| Hazard statements: | - |
| Precautionary statements: | - |
| Further information: | - |

| | |
|---|---------------|
| 2.3. | Other hazards |
| Endocrine Disrupting Properties: | |
| No known endocrine disrupting properties | |
| Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | |

| |
|---|
| SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS |
|---|

| CAS/ EC/ Index no. | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--------------------------------|--------------------------|--------------------------------|---------------------------------|--|
| 12501-23-4/ 603-020-3/ - | - | ≤ 1% | phosphotungstic acid hydrate | Skin Corr. 1B; H314 Eye Dam. 1; H318 |

| |
|-------------------------------------|
| SECTION 4 FIRST AID MEASURES |
|-------------------------------------|

| | |
|-------------------------------------|---|
| 4.1. | Description of first aid measures |
| General notes: | - |
| Following inhalation: | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician. |
| Following skin contact: | Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain. |
| Following eye contact: | Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician. |
| Following ingestion: | Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention. |
| Self-protection of the first aider: | Treat symptomatically. |
| 4.2. | Most important symptoms and effects, both acute and delayed |
| Following inhalation: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| Following skin contact: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |

| | | | |
|---------------|--|----------------------|-------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | |
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| | | |
|------|--|--|
| | Following eye contact: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| | Following ingestion: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| 4.3. | Indication of any immediate medical attention and special treatment needed | |
| | - | |

| | | |
|--|---|---|
| SECTION 5 FIREFIGHTING MEASURES | | |
| 5.1. | Extinguishing media | |
| | Suitable extinguishing media: | Small fire - water spray, dry powder, CO ₂ Large fire - water spray or alcohol-resistant foam |
| | Unsuitable extinguishing media: | water jet |
| 5.2. | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | No information available |
| 5.3. | Advice for firefighters | |
| | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. | |
| 5.4. | Additional information | |
| | Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media. | |

| | | |
|--|---|--|
| SECTION 6 ACCIDENTAL RELEASE MEASURES | | |
| 6.1. | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Wear protective equipment (see Section 8). | |
| 6.2. | Environmental precautions: | |
| | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. | |
| 6.3. | Methods and material for containment and cleaning up | |
| 6.3.1. | Bundling, covering of drains; capping procedures: | Sand or clay barriers. |

| | | | |
|---------------|--|----------------------|-------------|
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| | | |
|--------|-----------------------------|---|
| 6.3.2. | Cleaning up: | Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information: | - |
| 6.4. | Reference to other sections | - |

| SECTION 7 HANDLING AN STORAGE | | |
|--------------------------------------|--|---|
| 7.1. | Precautions for safe handling | |
| 7.1.1. | Protection measures | |
| | Measures to prevent fire: | Keep away from sources of heat and ignition. Do not smoke. |
| | Measures to prevent aerosol and dust generation: | Secure proper ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | - |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |
| 7.2. | Conditions for safe storage, including any incompatibilities | |
| | Technical measures and storage conditions: | Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances. |
| | Packaging materials: | Manufacturer's original packaging. |
| | Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| | Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| | Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9). |
| 7.3. | Specific end use(s) | |
| | Recommendations: | - |
| | Industrial sector specific solutions: | - |

| | | | | |
|---------------|--|----------------------|-------------|------------|
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SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
|-----------|--------|--|-------------------|--------------------------|
| | | ppm | mg/m ³ | |
| - | - | - | - | No information available |

Substance name: -

EC No: - CAS No: -

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

PNEC

| Environmental protection target | PNEC |
|------------------------------------|--------------------------|
| Fresh water | No information available |
| Freshwater sediments | No information available |
| Marine water | No information available |
| Marine sediments | No information available |
| Food chain | No information available |
| Microorganisms in sewage treatment | No information available |
| Soil (agricultural) | No information available |
| Air | No information available |

| | | | |
|---------------|--|----------------------|-------------|
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| | | |
|----------|--|--|
| 8.2. | Exposure controls | |
| 8.2.1. | Engineering measures | |
| | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace. |
| | Structural measures to prevent exposure: | No information available |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. |
| 8.2.2. | Personal protection equipment | |
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (preventing splashing) (EN 166) or visor. |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min |
| | Other skin protection: | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335). |
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards: | No information available |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

| SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES | |
|---|---|
| 9.1. | Information on basic physical and chemical properties |
| | Value |
| | Method |

| | | | |
|---------------|--|----------------------|-------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | |
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| | | |
|---|--------------------------|--------------------------|
| Physical state: | liquid | No information available |
| Colour: | colourless | No information available |
| Odour/odour threshold: | No information available | No information available |
| Melting point / freezing point: | No information available | No information available |
| Boiling point or initial boiling point and boiling range: | No information available | No information available |
| Flammability: | No information available | No information available |
| Lower and upper explosion limit: | No information available | No information available |
| Flash point: | No information available | No information available |
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | No information available | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |
| 9.2. | Other information | |
| | - | |

| SECTION 10 STABILITY AND REACTIVITY | | |
|--|-------------------------------------|--|
| 10.1. | Reactivity: | See subsections 10.3 through 10.5. |
| 10.2. | Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3. | Possibility of hazardous reactions: | No information available |
| 10.4. | Conditions to avoid: | No information available |
| 10.5. | Incompatible materials: | No information available |
| 10.6. | Hazardous decomposition products: | No information available |

| SECTION 11 TOXICOLOGICAL INFORMATION | |
|---|--|
| 11.1. | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| | Acute toxicity: |

| | | | | | |
|---------------|--|----------------------|-------------|----------|---|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | | |
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| Route of exposure: | Method | Species | Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
|----------------------|--------------------------|---------|---|---------------|---------|
| Oral exposure: | No information available | - | LD ₅₀ | - | - |
| Dermal exposure: | No information available | - | LD ₅₀ | - | - |
| Inhalation exposure: | No information available | - | LC ₅₀ | - | - |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|----------------------|--------------------------|--------------------------|------|
| Oral exposure: | No information available | No information available | - |
| Dermal exposure: | No information available | No information available | - |
| Inhalation exposure: | No information available | No information available | - |

Respiratory irritation: No information available

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|------------------|---------------|---------|------------|--------|------|
| Skin irritation: | - | - | - | - | - |
| Eye irritation: | - | - | - | - | - |

Sensitization

| | |
|----------------------|--------------------------|
| Dermal exposure: | No information available |
| Inhalation exposure: | No information available |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------------------|--------------------------|
| Oral exposure: | No information available |
| Dermal exposure: | No information available |
| Inhalation exposure: | No information available |
| Eye exposure: | No information available |

| | | | | | | |
|---------------|--|----------------------|-------------|----------|---|--|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | | | |
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| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Dose | Exposure time | Species | Method | Evaluation | Note |
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

| Specific target organ toxicity – repeated exposure (STOT RE): | | | |
|---|--------------------------|--------------------------|------|
| | Specific effects | Target organ | Note |
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |

| | | | | | |
|---------------|--|----------------------|-------------|----------|---|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 | Version: | 2 |

| | | | |
|--------------------|--------------------------|--------------------------|---|
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |

| | |
|--|---|
| CMR effects (carcinogenicity, mutagenicity, reproductive toxicity) | |
| Carcinogenicity: | Based on available data, the classification criteria are not met. |
| Mutagenicity <i>in-vitro</i> : | Based on available data, the classification criteria are not met. |
| Genotoxicity: | Based on available data, the classification criteria are not met. |
| Mutagenicity <i>in-vivo</i> : | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity: | Based on available data, the classification criteria are not met. |
| Reproductive toxicity: | Based on available data, the classification criteria are not met. |
| Summary of evaluation of the CMR properties: - | |

11.2 Information on other hazards:

11.2.1. Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other informations:

-

SECTION 12 ECOLOGICAL INFORMATION:

12.1. Toxicity

| Acute toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|----------------------|------------------|---------------|--------------------------|--------------------------|------------|------|
| Fish | LC ₅₀ | 96 hours | No information available | No information available | - | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | - | - |
| Algae/aquatic plants | IC ₅₀ | 8 days | No information available | No information available | - | - |

| | | | | | | |
|---------------|--|----------------------|-------------|----------|---|--|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 | Version: | 2 | |

| Chronic toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|----------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| Microorganisms | LC ₅₀ | 72 hours | - | - | - | - |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |

12.2. Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water (log K_{ow}):

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|--------------------------|----|----|--------------------------|--------------------------|------|
| - | No information available | - | - | No information available | No information available | - |
| | | | | | | |

| | | | | |
|---------------|--|----------------------|-------------|------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 | Version: 2 |

| Bioconcentration factor (BCF) | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Value | Species | Method | Evaluation | Note |
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

| Chronic ecotoxicity | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4. Mobility in soil

| Known or predicted distribution in environmental compartments: | | | | | |
|--|--------------------------|--------------------------|--------------------------|------|--|
| No information available | | | | | |
| Surface tension: | | | | | |
| Value | °C | Concentration | Method | Note | |
| No information available | No information available | No information available | No information available | - | |
| | | | | | |

| Adsorption / desorption | | | | | | |
|-------------------------|----------------------------------|-----------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | information available | No information available | No information available | No information available | - |
| Water-air | No information available | information available | No information available | No information available | No information available | - |
| Soil-air | No information available | information available | No information available | No information available | No information available | - |

| | | | |
|---------------|--|----------------------|-------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 |
| | | Version: | 2 |

| | |
|---|---|
| 12.5. | Results of PBT and vPvB assessment |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| 12.6. | Endocrine disrupting properties |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| 12.7. | Other adverse effects |
| | No information available |
| SECTION 13 DISPOSAL CONSIDERATIONS | |
| 13.1. | Waste treatment methods |
| 13.1.1. | Product/Packaging disposal: |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |
| 13.1.2. | Waste codes/waste designations according to Law: |
| | No information available |
| 13.1.3. | Waste treatment – relevant information: |
| | No information available |
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |
| 13.1.6. | Relevant Community provisions: |
| | - |

| | | | |
|---------------|--|----------------------|-------------|
| Trading name: | PHOSPHOTUNGSTIC ACID, 1% SOLUTION | | |
| Product code: | FVK1-OT-X** | Date of compilation: | 21 Dec 2022 |
| | | Version: | 2 |

SECTION 14 TRANSPORT INFORMATION

| | |
|---|---------------------------------------|
| Transporting/shipment by road (ADR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by rail (RID) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Inland waterway transport (ADN) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by sea (IMDG) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by air (ICAO-TI/IATA-DGR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |

| | | | |
|---------------|--|----------------------|-------------|
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| | |
|-------------------------------|---|
| Special precautions for user: | - |
| Further information: | - |

SECTION 15 REGULATORY INFORMATION

| | | |
|--------------|--|--|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture | |
| | EU regulations | |
| | Authorization and/or restrictions of use | |
| | Authorizations: | - |
| | Restrictions: | - |
| | Other EU regulations: | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) | |
| | National legislation: | <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2. | Chemical safety assessment | |
| | None | |

SECTION 16 Other information

| | | |
|--------------|-------------------------------|---|
| 16.1. | Indication of changes: | - |
|--------------|-------------------------------|---|

| | | | |
|---------------|--|----------------------|-------------|
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| | | |
|-------|---|---|
| 16.2. | Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: 314 318 | Causes severe skin burns and eye damage. Causes serious eye damage. |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

| |
|--|
| ANNEX: |
| Exposure scenario resulting to Chemical safety assessment |
| - |

| | | | |
|---------------|----------------------------|----------------------|-------------|
| Trading name: | PONCEAU S, SOLUTION | | |
| Product code: | PONS-OT-X** | Date of compilation: | 21 Dec 2022 |
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| SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING | | |
|---|---|---|
| 1.1. | Product identifier | |
| | Trading name: | PONCEAU S, SOLUTION |
| | Chemical name: | - |
| | Catalogue number: | PONS-OT-X** |
| 1.2. | Relevant identified uses of the substance or mixture and uses advised against | |
| | Uses: | For used with Martius Scarlet Blue kit. |
| | Uses advised against: | Only the identified uses are advised. |
| | Reason why uses advised against: | The product is intended for use only as an <i>in vitro</i> diagnostic medical device, registered at the Agency for Medicinal Products and Medical Devices and there is no reason to use it for other purposes |
| 1.3. | Details of the supplier of the safety data sheet | |
| | Supplier: | BioGnost Ltd. |
| | Address: | Medjugorska 59, Zagreb |
| | Telephone number: | +385 1 2409997 |
| | Fax no.: | +385 1 2404039 |
| | e-mail of competent person: | msds@biognost.hr |
| | National contact: | - |
| 1.4. | Emergency telephone number | |
| | National Protection and Rescue Directorate: | 112 |
| | Medical information: | +385 1 2348 342 |
| | Other information: | - |

| SECTION 2 HAZARDS INFORMATION | | |
|--|---|---------------------|
| 2.1. | Classification of the substance or mixture | |
| 2.1.1. | Classification (REGULATION (EC) No. 1272/2008 (CLP)) | |
| | Hazard class and category code: | Hazard statements*: |
| | Not identified as hazardous substance. | - |
| 2.1.2. | Additional information | |
| | - | |
| *For full text of Hazard- and EU Hazard-statements: see Section 16 | | |
| 2.2. | Classification according to EC Directive Nr. 1272/2008 CLP) | |
| | Product identification: | PONCEAU S, SOLUTION |
| | Identification number: | - |
| | Authorization no.: | - |
| | Hazard pictograms: | - |

| | | | | |
|---------------|----------------------------|----------------------|-------------|------------|
| Trading name: | PONCEAU S, SOLUTION | | | |
| Product code: | PONS-OT-X** | Date of compilation: | 21 Dec 2022 | Version: 2 |

| | |
|---------------------------|---|
| Signal word: | - |
| Hazard statements: | - |
| Precautionary statements: | - |
| Further information: | - |

| | |
|---|---------------|
| 2.3. | Other hazards |
| Endocrine Disrupting Properties: No known endocrine disrupting properties | |
| Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | |

| | | | | |
|---|--|--|--|--|
| SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS | | | | |
|---|--|--|--|--|

| CAS/ EC/ Index no. | REACH Registration No | Weight % content (or range) | Identification name | Classification according to Regulation (EC) No 1272/2008 (CLP) |
|--------------------------|--------------------------|--------------------------------|----------------------------------|--|
| - | - | - | Contains no hazardous substances | - |

| | |
|-------------------------------------|--|
| SECTION 4 FIRST AID MEASURES | |
|-------------------------------------|--|

| | |
|------|-----------------------------------|
| 4.1. | Description of first aid measures |
|------|-----------------------------------|

| | |
|-------------------------------------|---|
| General notes: | - |
| Following inhalation: | Carry the afflicted person out of the contaminated area into a well-ventilated area or out for fresh air. If breathing becomes erratic or it stops, immediately apply artificial respiration (other than mouth-to-mouth) and contact a physician. |
| Following skin contact: | Remove contaminated clothing. Immediately wash with plenty of water and soap. Seek medical assistance if the symptoms of irritation remain. |
| Following eye contact: | Rinse out with plenty of water with the eyelid held wide open using clean fingers. If the symptoms remain, immediately call a physician. |
| Following ingestion: | Do not induce vomiting. Make the afflicted person drink a glass of water. If spontaneous vomiting occurs, wash the mouth with water, then make the person drink 100-200 ml of water and seek medical attention. |
| Self-protection of the first aider: | Treat symptomatically. |

| | |
|------|---|
| 4.2. | Most important symptoms and effects, both acute and delayed |
|------|---|

| | |
|-------------------------|--|
| Following inhalation: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| Following skin contact: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |

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|---------------|----------------------------|----------------------|-------------|
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| | | |
|------|--|--|
| | Following eye contact: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| | Following ingestion: | According to our findings, chemical, physical and toxicological properties of the substance have not been entirely tested. |
| 4.3. | Indication of any immediate medical attention and special treatment needed | |
| | - | |

| SECTION 5 FIREFIGHTING MEASURES | | |
|--|---|---|
| 5.1. | Extinguishing media | |
| | Suitable extinguishing media: | Small fire - water spray, dry powder, CO ₂ Large fire - water spray or alcohol-resistant foam |
| | Unsuitable extinguishing media: | water jet |
| 5.2. | Special hazards arising from the substance or mixture | |
| | Hazardous combustion products: | No information available |
| 5.3. | Advice for firefighters | |
| | Use a self-contained open-circuit compressed air breathing apparatus and fireproof clothing. Cool closed containers exposed to fire with water spray or vapor. | |
| 5.4. | Additional information | |
| | Remove sources of heat and ignition. Do not contaminate the environment with extinguishing media. | |

| SECTION 6 ACCIDENTAL RELEASE MEASURES | | |
|--|---|--|
| 6.1. | Personal precautions, protective equipment and emergency procedures | |
| 6.1.1. | For non-emergency personnel | |
| | Protective equipment: | Use personal protective equipment (see Section 8). |
| | Accident prevention methods: | Evacuate members of all non-essential personnel and those members without protective equipment. Remove all sources of sparks and ignition. Do not smoke. |
| | Emergency procedures: | Mark the area using proper signs. |
| 6.1.2. | For emergency responders: | |
| | Wear protective equipment (see Section 8). | |
| 6.2. | Environmental precautions: | |
| | Do not dispose of in sewage, drainage system and waterways. In case of large spillage contact National Protection and Rescue Directorate (NPRD) on 112. | |
| 6.3. | Methods and material for containment and cleaning up | |
| 6.3.1. | Bundling, covering of drains; capping procedures: | Sand or clay barriers. |

| | | | |
|---------------|----------------------------|----------------------|-------------|
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| | | |
|--------|-----------------------------|---|
| 6.3.2. | Cleaning up: | Where possible, the substance can be absorbed by using inflammable material (sand, diatomaceous earth, vermiculite). Place the waste material in tightly closed impermeable containers. Store the substance in well ventilated storage rooms until disposal. Submit for disposal to the legal persons authorized by the Ministry of Environmental and Nature Protection. After disposal of the products, wash the area and involved materials with water. |
| 6.3.3. | Other information: | - |
| 6.4. | Reference to other sections | |
| | - | |

| SECTION 7 HANDLING AN STORAGE | | |
|--------------------------------------|--|---|
| 7.1. | Precautions for safe handling | |
| 7.1.1. | Protection measures | |
| | Measures to prevent fire: | Keep away from sources of heat and ignition. Do not smoke. |
| | Measures to prevent aerosol and dust generation: | Secure proper ventilation. |
| | Measures to protect the environment: | Prevent spilling into the sewage system and waterways. |
| | Other measures: | - |
| 7.1.2. | Advice on general occupational hygiene: | |
| | Do not eat, drink or smoke in the workspace. Thoroughly wash hands after work and before eating. | |
| 7.2. | Conditions for safe storage, including any incompatibilities | |
| | Technical measures and storage conditions: | Keep in tightly closed and upright set containers in a well ventilated storage rooms, and away from sources of heat, sunlight, and other incompatible substances. |
| | Packaging materials: | Manufacturer's original packaging. |
| | Requirements for storage rooms and vessels: | Keep away from food and drink. Keep the containers tightly closed. |
| | Advices for storage equipment: | The storage must be made of hard material; floors must be resistant to chemicals. There must be no drain that directly leads into sewage system. Secure proper ventilation. |
| | Further information on storage conditions: | Do not place the unused material in the storage room and do not use empty containers for storing other chemicals. Do not store with incompatible materials (see Section 9). |
| 7.3. | Specific end use(s) | |
| | Recommendations: | - |
| | Industrial sector specific solutions: | - |

| | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|
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SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

| Substance | CAS No | Occupational exposure limit values/short term values | | Biological limit values |
|-----------|--------|--|-------------------|--------------------------|
| | | ppm | mg/m ³ | |
| - | - | - | - | No information available |

| | |
|-----------------|---|
| Substance name: | - |
| EC No: | - |
| CAS No: | - |

DNEL

Industrial

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

Critical physical parameters: solubility, flammability, corrosivity: -

Consumer

| Route of exposure: | Acute effect local | Acute effect systemic | Chronic effect local | Chronic effect systemic |
|--------------------|--------------------|-----------------------|----------------------|-------------------------|
| Oral | - | - | - | - |
| Inhalation | - | - | - | - |
| Dermal | - | - | - | - |

PNEC

| Environmental protection target | PNEC |
|------------------------------------|--------------------------|
| Fresh water | No information available |
| Freshwater sediments | No information available |
| Marine water | No information available |
| Marine sediments | No information available |
| Food chain | No information available |
| Microorganisms in sewage treatment | No information available |
| Soil (agricultural) | No information available |
| Air | No information available |

| | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|
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| | | |
|----------|--|--|
| 8.2. | Exposure controls | |
| 8.2.1. | Engineering measures | |
| | Substance/mixture related measures to prevent exposure during identified uses: | Use the product in well ventilated rooms. Use personal protective equipment. Do not eat, drink or smoke in the workspace. |
| | Structural measures to prevent exposure: | No information available |
| | Organisational measures to prevent exposure: | Organization of work in order to reduce other worker's influence during work process. |
| | Technical measures to prevent exposure: | Secure proper workspace ventilation in order to keep concentration levels in air below permitted levels. |
| 8.2.2. | Personal protection equipment | |
| 8.2.2.1. | Eye and face protection: | Safety glasses that stick to face (preventing splashing) (EN 166) or visor. |
| 8.2.2.2. | Skin protection | |
| | Hand protection: | Protective gloves must be according to the EU Directive 2016/425/EEC and standard EN 374. Glove material: nitrile rubber Glove thickness: ≥0.50 mm Break through time: >480 min |
| | Other skin protection: | Wear antistatic clothing made of natural fibers (such as cotton) with long sleeves (EN 13034), and shoes that cover the entire foot (EN 10335). |
| 8.2.2.3. | Respiratory protection: | Protective full face mask (EN 136) or half mask (EN 140) equipped with a filter for organic vapors, type "A" (boiling point >65°C) according to EN 14387) used when concentration levels exceed GVI. |
| 8.2.2.4. | Thermal hazards: | No information available |
| 8.2.3. | Environmental exposure controls | |
| | Substance/mixture related measures to prevent exposure: | See Section 6 |
| | Structural measures to prevent exposure: | Use modern equipment. |
| | Organisational measures to prevent exposure: | Adapt the work process to the required working conditions of the workplace. |
| | Technical measures to prevent exposure: | See Section 6 |

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | | |
|------|---|--------|
| 9.1. | Information on basic physical and chemical properties | |
| | Value | Method |

| | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|
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| | | |
|---|--|--------------------------|
| Physical state: | liquid | No information available |
| Colour: | dark red | No information available |
| Odour/odour threshold: | mild acetic acid like/no information available | No information available |
| Melting point / freezing point: | No information available | No information available |
| Boiling point or initial boiling point and boiling range: | No information available | No information available |
| Flammability: | No information available | No information available |
| Lover and upper explosion limit: | No information available | No information available |
| Flash point: | No information available | No information available |
| Auto-ignition temperature: | No information available | No information available |
| Decomposition temperature: | No information available | No information available |
| pH: | 2.2 -3.2 | No information available |
| Kinematic viscosity: | No information available | No information available |
| Solubility: | No information available | No information available |
| Partition coefficient n-octanol/water (log value): | No information available | No information available |
| Vapour pressure: | No information available | No information available |
| Density and/or relative density: | No information available | No information available |
| Relative vapour density: | No information available | No information available |
| Particle characteristics: | No information available | No information available |
| 9.2. | Other information | |
| | - | |

| SECTION 10 STABILITY AND REACTIVITY | | |
|--|-------------------------------------|--|
| 10.1. | Reactivity: | See subsections 10.3 through 10.5. |
| 10.2. | Chemical stability: | The product is chemically stable under standard ambient conditions of storing and using. |
| 10.3. | Possibility of hazardous reactions: | No information available |
| 10.4. | Conditions to avoid: | No information available |
| 10.5. | Incompatible materials: | No information available |
| 10.6. | Hazardous decomposition products: | No information available |

| SECTION 11 TOXICOLOGICAL INFORMATION | |
|---|--|
| 11.1. | Information on hazard classes as defined in Regulation (EC) No 1272/2008 |
| | Acute toxicity: |

| | | | | |
|---------------|----------------------------|----------------------|-------------|------------|
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| Route of exposure: | Method | Species | Effective dose LD ₅₀ /LC ₅₀ or ATE _{mixture} | Exposure time | Results |
|----------------------|--------------------------|---------|---|---------------|---------|
| Oral exposure: | No information available | - | LD ₅₀ | - | - |
| Dermal exposure: | No information available | - | LD ₅₀ | - | - |
| Inhalation exposure: | No information available | - | LC ₅₀ | - | - |

Specific target organ toxicity – single exposure (STOT SE):

| | Specific effects | Target organ | Note |
|----------------------|--------------------------|--------------------------|------|
| Oral exposure: | No information available | No information available | - |
| Dermal exposure: | No information available | No information available | - |
| Inhalation exposure: | No information available | No information available | - |

Respiratory irritation: No information available

Irritation and corrosion

| | Exposure time | Species | Evaluation | Method | Note |
|------------------|---------------|---------|------------|--------|------|
| Skin irritation: | - | - | - | - | - |
| Eye irritation: | - | - | - | - | - |

Sensitization

| | |
|----------------------|--------------------------|
| Dermal exposure: | No information available |
| Inhalation exposure: | No information available |

Symptoms related to the physical, chemical and toxicological characteristics

| | |
|----------------------|--------------------------|
| Oral exposure: | No information available |
| Dermal exposure: | No information available |
| Inhalation exposure: | No information available |
| Eye exposure: | No information available |

| | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|
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| Repeated dose toxicity (subacute, subchronic, chronic) | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| | Dose | Exposure time | Species | Method | Evaluation | Note |
| Subacute oral | No information available | No information available | No information available | No information available | No information available | - |
| Subacute dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | No information available | No information available | No information available | - |
| Chronic oral | No information available | No information available | No information available | No information available | No information available | - |
| Chronic dermal | No information available | No information available | No information available | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | No information available | No information available | No information available | - |

| Specific target organ toxicity – repeated exposure (STOT RE): | | | |
|---|--------------------------|--------------------------|------|
| | Specific effects | Target organ | Note |
| Subacute oral | No information available | No information available | - |
| Subacute dermal | No information available | No information available | - |
| Subacute inhalation | No information available | No information available | - |
| Subchronic oral | No information available | No information available | - |
| Subchronic dermal | No information available | No information available | - |
| Subchronic inhalation | No information available | No information available | - |
| Chronic oral | No information available | No information available | - |

| | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|
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| | | | |
|--------------------|--------------------------|--------------------------|---|
| Chronic dermal | No information available | No information available | - |
| Chronic inhalation | No information available | No information available | - |

| | |
|--|---|
| CMR effects (carcinogenicity, mutagenicity, reproductive toxicity) | |
| Carcinogenicity: | Based on available data, the classification criteria are not met. |
| Mutagenicity <i>in-vitro</i> : | Based on available data, the classification criteria are not met. |
| Genotoxicity: | Based on available data, the classification criteria are not met. |
| Mutagenicity <i>in-vivo</i> : | Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity: | Based on available data, the classification criteria are not met. |
| Reproductive toxicity: | Based on available data, the classification criteria are not met. |
| Summary of evaluation of the CMR properties: - | |

11.2 Information on other hazards:

11.2.1. Endocrine disrupting properties:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

11.2.2. Other informations:

-

SECTION 12 ECOLOGICAL INFORMATION:

12.1. Toxicity

| Acute toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|----------------------|------------------|---------------|--------------------------|--------------------------|------------|------|
| Fish | LC ₅₀ | 96 hours | No information available | No information available | - | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | - | - |
| Algae/aquatic plants | IC ₅₀ | 8 days | No information available | No information available | - | - |

| | | | | | | |
|---------------|----------------------------|----------------------|-------------|----------|---|--|
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| Chronic toxicity | Dose | Exposure time | Species | Method | Evaluation | Note |
|----------------------|------------------|---------------|--------------------------|--------------------------|--------------------------|------|
| Microorganisms | LC ₅₀ | 72 hours | - | - | - | - |
| Fish | LC ₅₀ | 96 hours | No information available | No information available | No information available | - |
| Crustacea: | EC ₅₀ | 48 hours | No information available | No information available | No information available | - |
| Algae/aquatic plants | IC ₅₀ | 72 hours | No information available | No information available | No information available | - |
| Other organisms | - | - | - | - | - | - |

12.2. Persistence and degradability

Abiotic degradation

| | Degradation half-lives | Method | Evaluation | Note |
|--------------|--------------------------|--------------------------|--------------------------|------|
| Marine water | No information available | No information available | No information available | - |
| Fresh water | No information available | No information available | No information available | - |
| Air | No information available | No information available | No information available | - |
| Soil | No information available | No information available | No information available | - |

Biodegradation

| % Degradation | Time (days) | Method | Evaluation | Note |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

12.3. Bioaccumulative potential

Partition coefficient: n-octanol/water (log Kow):

| Value | Concentration | pH | °C | Method | Evaluation | Note |
|-------|--------------------------|----|----|--------------------------|--------------------------|------|
| - | No information available | - | - | No information available | No information available | - |
| | | | | | | |

| | | | | |
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| Bioconcentration factor (BCF) | | | | |
|-------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Value | Species | Method | Evaluation | Note |
| No information available | No information available | No information available | No information available | No information available |
| | | | | |

| Chronic ecotoxicity | | | | | | |
|--|------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Value | Dose | Exposure time | Species | Method | Evaluation | Note |
| Chronic toxicity on fish | LC ₅₀ | No information available | No information available | No information available | No information available | - |
| Chronic toxicity on crustacea (<i>Daphnia</i>) | EC ₅₀ | No information available | No information available | No information available | No information available | - |

12.4. Mobility in soil

| Known or predicted distribution in environmental compartments: | | | | | | |
|--|--------------------------|--------------------------|--------------------------|------|--|--|
| No information available | | | | | | |
| Surface tension: | | | | | | |
| Value | °C | Concentration | Method | Note | | |
| No information available | No information available | No information available | No information available | - | | |
| | | | | | | |

| Adsorption / desorption | | | | | | |
|-------------------------|----------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------|
| Transport | A/D coefficient Henry's constant | | log Kow | Evaporation rate | Method | Note |
| Soil-water | No information available | No information available | No information available | No information available | No information available | - |
| Water-air | No information available | No information available | No information available | No information available | No information available | - |
| Soil-air | No information available | No information available | No information available | No information available | No information available | - |

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| | |
|---|---|
| 12.5. | Results of PBT and vPvB assessment |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| 12.6. | Endocrine disrupting properties |
| | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |
| 12.7. | Other adverse effects |
| | No information available |
| SECTION 13 DISPOSAL CONSIDERATIONS | |
| 13.1. | Waste treatment methods |
| 13.1.1. | Product/Packaging disposal: |
| | Submit for disposal to the legal person authorized by the Ministry of Environmental and Nature Protection. |
| 13.1.2. | Waste codes/waste designations according to Law: |
| | No information available |
| 13.1.3. | Waste treatment – relevant information: |
| | No information available |
| 13.1.4. | Sewage disposal – relevant information: |
| | Waste must not be disposed of into the sewage system. |
| 13.1.5. | Other disposal recommendations: |
| | Do not dispose of the product's remains into the sewage system. Submit the remains to the collectors authorized by the ministry in charge. Do not dispose of the packaging into the sewage system. Submit the packaging to the collectors authorized by the ministry in charge. Do not dispose of in places where ignition may occur. |
| 13.1.6. | Relevant Community provisions: |
| | - |

| | | | |
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| SECTION 14 TRANSPORT INFORMATION | |
|---|---------------------------------------|
| Transporting/shipment by road (ADR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by rail (RID) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Inland waterway transport (ADN) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by sea (IMDG) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |
| Special precautions for user: | - |
| Transporting/shipment by air (ICAO-TI/IATA-DGR) | |
| UN number: | Not subject to transport regulations. |
| UN proper shipping name: | - |
| Transport hazard class(es): | - |
| Packing group: | - |
| Environmentally hazardous: | - |

| | | | |
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| Special precautions for user: | - |
| Further information: | - |

| SECTION 15 REGULATORY INFORMATION | |
|--|---|
| 15.1. | Safety, health and environmental regulations/legislation specific for the substance or mixture |
| | EU regulations |
| | Authorization and/or restrictions of use |
| | Authorizations: - |
| | Restrictions: - |
| | <p>Other EU regulations:</p> <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC;</p> <p>Directive 2004/42/CE of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC;</p> <p>Council Directive 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work;</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006;</p> <p>REACH Restrictions on the manufacturing, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII);</p> |
| | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline) |
| | <p>National legislation:</p> <p>Chemicals Act, Regulation on classification, packaging and labeling of dangerous substances, Ordinance on occupational exposure limit values and on biological limit values, Regulation on categories, types and classification of waste with a waste catalog and list of hazardous waste, Ordinance on writing Material safety data sheet, Transport of Hazardous Substances Act</p> |
| 15.2. | Chemical safety assessment |
| | None |

| SECTION 16 Other information | |
|-------------------------------------|--------------------------|
| 16.1. | Indication of changes: - |

| | | | | | |
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| | | |
|-------|---|---|
| 16.2. | Abbreviations and acronyms: | <p>ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)</p> <p>IMDG: International Maritime Code for Dangerous Goods</p> <p>IATA: International Air Transport Association</p> <p>GHS: Globally Harmonised System of Classification and Labelling of Chemicals</p> <p>EINECS: European Inventory of Existing Commercial Chemical Substances</p> <p>CAS: Chemical Abstracts Service (division of the American Chemical Society)</p> <p>DNEL: Derived No-Effect Level (UK REACH)</p> <p>LC50: Lethal concentration, 50 percent</p> <p>LD50: Lethal dose, 50 percent</p> <p>PBT: Persistent, Bioaccumulative and Toxic</p> <p>vPvB: very Persistent and very Bioaccumulative</p> |
| 16.3. | Key literature references and source of data: | - |
| 16.4. | Classification and procedure used to derive the classification for mixture according to Regulation (EC) 1272/2008 (CLP) | |
| | Classification | Classification procedure |
| | - | - |
| 16.5. | Relevant H statements (number and full text) | |
| | H: | - |
| 16.6. | Training advice: | - |
| 16.7. | Further information: | <p>** "X" in the product code marks different volumes (different packagings of the product)</p> <p>We are not responsible for consequences in case of failure to comply with instructions for use or improper use of the product described in this material safety data sheet.</p> |

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| ANNEX: |
| Exposure scenario resulting to Chemical safety assessment |
| - |