




|               |                               |                      |              |          |   |
|---------------|-------------------------------|----------------------|--------------|----------|---|
| Trade name:   | <b>MAY-GRUENWALD SOLUTION</b> |                      |              |          |   |
| Product code: | MG-OT-X**                     | Date of compilation: | 07 June 2019 | Version: | 5 |

| <b>SECTION 1: Identification of the substance/mixture and of the company/undertaking</b> |   |
|--|---|
| <b>1.1.</b>  | <b>Product identifier</b>   |
|  | Trade name: MAY-GRUENWALD SOLUTION  |
|  | Chemical name: -  |
|  | Catalogue number: MG-OT-X**   |
| <b>1.2.</b>  | <b>Relevant identified uses of the substance or mixture and uses advised against</b>  |
|  | Uses: For use in hematology and cytology.   |
|  | 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. |
| <b>1.3.</b>  | <b>Details of the supplier of the safety data sheet</b>   |
|  | Supplier: BioGnost Ltd.   |
|  | Address: Medjugorska 59, Zagreb   |
|  | Telephone number: +385 1 2409997  |
|  | Telefax: +385 1 2404039   |
|  | e-mail of competent person: <a href="mailto:msds@biognost.hr">msds@biognost.hr</a>  |
|  | National contact:   |
| <b>1.4.</b>  | <b>Emergency telephone numbers</b>  |
|  | National Protection and Rescue Directorate: 112   |
|  | Medical information: +385 1 2348 342  |
|  | Other information: -  |

| <b>SECTION 2. Hazards identification</b>                            |   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
|---|---|---------------------------------|--------------------|--------------|------|--------------|------|--------------|------|--------------|------|-----------|------|
| <b>2.1.</b>   | <b>Classification of the substance or mixture</b>   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| <b>2.1.1.</b>   | <b>Classification according to Regulation (EC) No 1272/2008 (CLP)</b>   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
|   | <table border="1"> <thead> <tr> <th>Hazard class and category code:</th> <th>Hazard statement*:</th> </tr> </thead> <tbody> <tr> <td>Flam. Liq. 2</td> <td>H225</td> </tr> <tr> <td>Acute Tox. 3</td> <td>H301</td> </tr> <tr> <td>Acute Tox. 3</td> <td>H311</td> </tr> <tr> <td>Acute Tox. 3</td> <td>H331</td> </tr> <tr> <td>STOT SE 1</td> <td>H370</td> </tr> </tbody> </table> | Hazard class and category code: | Hazard statement*: | Flam. Liq. 2 | H225 | Acute Tox. 3 | H301 | Acute Tox. 3 | H311 | Acute Tox. 3 | H331 | STOT SE 1 | H370 |
| Hazard class and category code:                                     | Hazard statement*:  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| Flam. Liq. 2  | H225  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| Acute Tox. 3  | H301  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| Acute Tox. 3  | H311  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| Acute Tox. 3  | H331  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| STOT SE 1   | H370  |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| <b>2.1.2.</b>   | <b>Additional information</b>   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
|   | -   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| * For full text of Hazard- and EU Hazard-statements: see SECTION 16 |   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
| <b>2.2.</b>   | <b>Label elements</b>   |                                 |                    |              |      |              |      |              |      |              |      |           |      |
|   | Product identification: MAY-GRUENWALD SOLUTION  |                                 |                    |              |      |              |      |              |      |              |      |           |      |

|               |                               |                      |              |            |
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|                                       |  |
|---------------------------------------|--|
| Identification number:                | -  |
| Authorisation number:                 | -  |
| Hazard pictograms:                    | <p>GHS02 </p> <p>GHS06 </p> <p>GHS08 </p>  |
| Signal word:                          | Danger   |
| Hazard statements:                    | <p>H225 Highly flammable liquid and vapor.</p> <p>H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.</p> <p>H370 Causes damage to organs (eyes).</p>   |
| Precautionary statements:             | <p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P280 Wear protective gloves, protective clothing, eye protection, face protection.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.</p> |
| Supplemental hazard information (EU): | -  |
| 2.3. Other hazards                    | -  |

| 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) |
|   |                       |                             |                     |  |

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|--|---------------------------|--------|----------|---|
| 67-56-1/<br>200-659-6/<br>603-001-00-X | 01-2119433307-<br>44-xxxx | ≥ 50 % | methanol | Flam. Liq. 2, H225<br>Acute Tox. 3, H301<br>Acute Tox. 3, H311<br>Acute Tox. 3, H331<br>STOT SE 1, H370 |
|--|---------------------------|--------|----------|---|

| <b>SECTION 4. First aid measures</b> |  |   |
|--------------------------------------|--|---|
| 4.1.                                 | Description of first aid measures  |   |
|                                      | General notes:   | First aider needs to protect himself.   |
|                                      | Following inhalation:  | Carry the afflicted person out for fresh air, place them in half lying position and calm them down. If breathing stops, immediately apply artificial respiration, if necessary also oxygen. In case of irregular breathing or respiratory arrest provide artificial respiration.  |
|                                      | Following skin contact:  | Remove contaminated clothing. Wash with plenty of water and soap for at least 20 minutes. Seek medical assistance if the symptoms of irritation remain.   |
|                                      | Following eye contact:   | Rinse out with plenty of water with the eyelid held wide open for at least 20 minutes. If the symptoms remain, immediately call in ophthalmologist.   |
|                                      | Following ingestion:   | Rinse with water and expectorate. Make the afflicted person drink one glass (100 ml) of 40% ethanol (adult dose). Call a doctor immediately (mention methanol ingestion). Only in exceptional cases, if no medical care is available within one hour, induce vomiting (only in fully conscious persons) and make victim drink ethanol again (approx. 0.3 ml of a 40% alcoholic beverage/kg body weight/hour). Do not attempt to neutralise. |
|                                      | Self-protection of the first aider   | Avoid direct contact with the chemical; use appropriate protective equipment described in Section 8.  |
| 4.2.                                 | Most important symptoms and effects, both acute and delayed                |   |
|                                      | Following inhalation:  | Irritation to the airways and possible damage to the lung probably only through very high vapor concentrations, then even absorptive-toxic effects.   |
|                                      | Following skin contact:  | Minor/no irritation, degreasing action, following massive contact watch for danger of skin absorption and possibly delayed onset of systemic effects.   |
|                                      | Following eye contact:   | Slight through to moderate irritation due to the liquid and concentrated vapors, conjunctivitis, later chemosis, apparently minor probability of cornea damage, later occurring visual disturbances are caused not primarily through local contact but are systemically related (following absorption).   |
|                                      | Following ingestion:   | Stomach and bowel irritation, feeling unwell, nausea, vomiting, strong abdominal pain. Absorption may cause toxic effects.  |
| 4.3.                                 | Indication of any immediate medical attention and special treatment needed |   |
|                                      | -  |   |

| <b>SECTION 5. Firefighting measures</b> |                               |  |
|---|-------------------------------|--|
| 5.1.                                    | Extinguishing media           |  |
|   | Suitable extinguishing media: | water spray, foam, dry powder, CO <sub>2</sub> |

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|------|---|---|
|      | Unsuitable extinguishing media:   | No information available  |
| 5.2. | Special hazards arising from the substance or mixture   |   |
|      | Hazardous by products of fire:  | Combustible. Vapours are heavier than air and may spread along floors. Forms explosive mixtures with air at ambient temperatures. Development of hazardous combustion gases or vapours possible in the event of fire. |
| 5.3. | Advice for firefighters   |   |
|      | Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. |   |
| 5.4. | Additional information  |   |
|      | Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.          |   |

|   |  |   |
|---|--|---|
| <b>SECTION 6. Accidental release measures</b> |  |   |
| 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:   | Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.s  |
|   | Emergency procedures:  | Mark the area using proper signs.   |
| 6.1.2.  | For emergency responders:  |   |
|   | Use protective equipment; in case of inadequate ventilation use adequate airways protective equipment (see Section 8). |   |
| 6.2.  | Environmental precautions:   |   |
|   | Do not let product enter drains. Risk of explosion.  |   |
| 6.3.  | Methods and materials for containment and cleaning up  |   |
| 6.3.1.  | Bundling, covering of drains; capping procedures:  | Cover drains. Collect, bind and pump off spills.  |
| 6.3.2.  | For cleaning:  | 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 and involved materials with water. |
| 6.3.3.  | Other information:   | Do not use tools that may cause sparks.   |
| 6.4.  | Reference to other sections  |   |

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|---|
| <p>See Section 7 for information on safe handling.<br/>         See Section 8 for information on personal protective equipment.<br/>         See Section 13 for disposal information.</p> |
|---|

**SECTION 7. Handling and storage**

**7.1. Precautions for safe handling**

**7.1.1. Protection measures**

|   |  |
|---|--|
| Measures for fire prevention:                     | Use in well ventilated storage rooms. Keep away from sources of heat and ignition and direct sunlight. Do not smoke. Take precautionary measures against static discharge. |
| Measures for preventing spray and dust formation: | Secure proper ventilation. Prevent formation of aerosols.  |
| Environmental precautions:                        | 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:  | 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 10). |

**7.3. Specific end use(s)**

|                                       |   |
|---------------------------------------|---|
| Recommendations:                      | - |
| Industrial sector specific solutions: | - |

**SECTION 8. Exposure controls/personal protection**

**8.1. Control parameters**

|               |                               |                      |              |            |
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| Substance | CAS No  | Occupational exposure limit values/short term values |                   | Biological limit values  |
|-----------|---------|--|-------------------|--|
|           |         | ppm  | mg/m <sup>3</sup> |  |
| Methanol  | 67-56-1 | 200  | 260               | 24.7 mmol/mol of creatinine* (7.0 mg/g of creatinine*), end-of-shift urinary excretion |

\* For all results pertaining creatinine levels, creatinine concentration < 0.5 g/l and > 3.0 g/l may not be taken into consideration

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

**DNEL**

**Industrial**

| Route of exposure: | Acute effect local               | Acute effect systemic            | Chronic effect local             | Chronic effect systemic          |
|--------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Oral               | -                                | -                                | -                                | -                                |
| Inhalation         | 260 mg/m <sup>3</sup> (methanol) | 260 mg/m <sup>3</sup> (methanol) | 260 mg/m <sup>3</sup> (methanol) | 260 mg/m <sup>3</sup> (methanol) |
| Dermal             | -                                | 40 mg/kg (methanol)              |                                  | 40 mg/kg (methanol)              |

Critical physical parameters: solubility, flammability, corrosivity: -

**Consumer**

| Route of exposure: | Acute effect local              | Acute effect systemic           | Chronic effect local            | Chronic effect systemic         |
|--------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Oral               | -                               | 8 mg/kg (methanol)              | -                               | 8 mg/kg (methanol)              |
| Inhalation         | 50 mg/m <sup>3</sup> (methanol) | 50 mg/m <sup>3</sup> (methanol) | 50 mg/m <sup>3</sup> (methanol) | 50 mg/m <sup>3</sup> (methanol) |
| Dermal             | -                               | 8 mg/kg (methanol)              |                                 | 8 mg/kg (methanol)              |

**PNEC**

| Environmental protection target    | PNEC                     |
|------------------------------------|--------------------------|
| Fresh water                        | 154 mg/l (methanol)      |
| Freshwater sediments               | 570.4 mg/kg (methanol)   |
| Marine water                       | 15.4 mg/l (methanol)     |
| Marine sediments                   | No information available |
| Food chain                         | No information available |
| Microorganisms in sewage treatment | 100 mg/l (methanol)      |
| Soil (agricultural)                | 23.5 mg/kg (methanol)    |
| Air                                | No information available |

|               |                               |                      |              |            |
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|          |  |   |
|----------|--|---|
| 8.2.     | Exposure controls  |   |
| 8.2.1.   | Appropriate 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:   | Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).   |
| 8.2.2.2. | Skin protection:   |   |
|          | Hand protection:   | The protective gloves to be used must comply with the specification of EC Directive 2016/425 and the related standard EN374.<br>Full contact:<br>Glove material: butyl rubber<br>Glove thickness: 0.70 mm<br>Break through time: > 480 min<br>Splash contact:<br>Gloves material: viton (R)<br>Glove thickness: 0.70 mm<br>Break through time: >120 min |
|          | Other skin protection:   | Complete antistatic suit protecting against chemicals (EN 13688). The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace and shoes that cover the entire foot.  |
| 8.2.2.3. | Respiratory protection:  | Required when vapours/aerosols are generated. Recommended filter type: gas filter AX, colour code brown (EN 371). The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.  |
| 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   |

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|--|---|
| Structural measures to prevent exposure:     | Use modern equipment. Do not let product enter drains. Risk of explosion.   |
| 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:   | blue  | No information available |
| Odour:  | methanol like   | No information available |
| Odor threshold:                                   | No information available                              | No information available |
| pH:   | No information available                              | No information available |
| Melting point/freezing point:                     | No information available                              | No information available |
| Initial boiling point and boiling range:          | 65 °C (at 1.013 hPa)                                  | No information available |
| Flash point:                                      | 12 °C   | No information available |
| Evaporation rate:                                 | No information available                              | No information available |
| Flammability (solid, gas):                        | No information available                              | No information available |
| Upper/lower flammability or explosive limits:     | lower: 6 % (V) methanol<br>upper: 36.5 % (V) methanol | No information available |
| Vapour pressure:                                  | 128 hPa   | No information available |
| Vapour density:                                   | No information available                              | No information available |
| Relative density                                  | 0.79 (20 °C)  | No information available |
| Bulk density:                                     | No information available                              | No information available |
| Solubility(ies):                                  | Soluble in water (20 °C)                              | No information available |
| Partition coefficient: n-octanol/water (log Kow): | No information available                              | No information available |
| Auto-ignition temperature:                        | No information available                              | No information available |
| Decomposition temperature:                        | No information available                              | No information available |
| Viscosity:  | No information available                              | No information available |
| Explosive properties:                             | Not classified as explosive.                          | No information available |
| Oxidising properties:                             | No information available                              | No information available |

**9.2. Other information**

|  |
|--|
| Ignition temperature: 420°C (at 1.013 hPa) |
|--|



|               |                               |                      |              |          |   |
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| <b>SECTION 10.: Stability and reactivity</b> |                                     |  |
|--|-------------------------------------|--|
| 10.1.  | Reactivity:                         | Vapours may form explosive mixture with air.   |
| 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: | <p>Risk of explosion with: Oxidizing agents, alkali metals, nitric acid, sulphuric acid, hydrogen peroxide, permanganic acid, sodium hypochlorite.</p> <p>The substance can react dangerously with: halogens, oxidizing agents, reducing agents, acids, acetyl bromide, alkylaluminium solutions, beryllium hydride, chloroform, chromium(VI)-oxide, cyanuric chloride, alkaline-earth metals, magnesium splinters, phosphorus trioxide, Raney-nickel/hydrogenation, acid anhydrides, acid halogenides, tetrachloromethane/light metals.</p> |
| 10.4.  | Conditions to avoid:                | Sources of heat, sparks, and ignition.   |
| 10.5.  | Incompatible materials:             | Various plastics, magnesium, zinc alloys, aluminium and galvanised iron.   |
| 10.6.  | Hazardous decomposition products:   | No information available.  |

| <b>SECTION 11. Toxicological information</b>                |                          |                          |   |                                 |                               |
|---|--------------------------|--------------------------|---|---------------------------------|-------------------------------|
| 11.1. Information on toxicological effects                  |                          |                          |   |                                 |                               |
| Acute toxicity:   |                          |                          |   |                                 |                               |
| Route of exposure:  | Method                   | Species                  | Effective Dose<br>LD <sub>50</sub> /LC <sub>50</sub> or<br>ATE <sub>mixture</sub> | Exposure time                   | Results                       |
| Oral:   | No information available | rat                      | LD <sub>50</sub>  | -                               | 1,187 -2,769 mg/kg (methanol) |
| Dermal:   | No information available | rabbit                   | LD <sub>50</sub>  | -                               | 17.100 mg/kg (methanol)       |
| Inhalation:   | No information available | rat                      | LC <sub>50</sub>  | 4 h                             | 131.25 mg/l (methanol)        |
| 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 | Eyes                     |   | mixture causes damage to organs |                               |
| Aspiration hazard:  |                          |                          |   |                                 |                               |
|   |                          |                          | No information available  |                                 |                               |

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| Irritation and corrosion  |   |                          |                          |                          |   |      |
|---|---|--------------------------|--------------------------|--------------------------|---|------|
|   | Exposure time   | Species                  | Evaluation               | Method                   | Note  |      |
| Skin corrosion/irritation   | -   | -                        | -                        | -                        | drying-out effect resulting in rough and chapped skin |      |
| Serious eye damage/irritation   | -   | -                        | -                        | -                        | irritations of mucous membranes                       |      |
| Sensitization   |   |                          |                          |                          |   |      |
| Skin sensitization:   | Does not cause sensitization.   |                          |                          |                          |   |      |
| Respiratory sensitization:  | No information available  |                          |                          |                          |   |      |
| Symptoms related to the physical, chemical and toxicological characteristics: |   |                          |                          |                          |   |      |
| Oral exposure:  | Stomach and bowel irritation, acidosis, drop in blood pressure, feeling unwell, vomiting, strong abdominal pain. Absorption may cause toxic effects. Damage to liver, kidney, cardiac.  |                          |                          |                          |   |      |
| Dermal exposure:  | Minimum level of irritation, defatting; prolonged exposure may cause absorption and greater possibility of delayed systemic effects.  |                          |                          |                          |   |      |
| Inhalation exposure:  | Airways irritation and possible lung damage due to high levels of vapor concentration, dizziness, drowsiness, headache. Absorption may cause toxic effects.   |                          |                          |                          |   |      |
| Eye exposure:   | Mild to moderate irritation due to vapor, conjunctivitis, later chemosis, lesser possibility of cornea damage, blindness, irreversible damage of the optical nerve. Visual impairments may occur later, after the absorption. |                          |                          |                          |   |      |
| 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. | Practical experiences:       |                          |
|       | Classification observations: | No information available |
|       | Other observations:          | No information available |
| 11.3. | General notes:               |                          |
|       | -                            |                          |

**SECTION 12. Ecological information**

|                              |                               |                          |  |                          |                          |                          |
|------------------------------|-------------------------------|--------------------------|--|--------------------------|--------------------------|--------------------------|
| 12.1.                        | Toxicity                      |                          |  |                          |                          |                          |
| Acute (short-term) toxicity  | Dose                          | Exposure time            | Species  | Method                   | Evaluation               | Note                     |
| Fish                         | LC <sub>50</sub>              | 96 hours                 | <i>Lepomis macrochirus</i> (Bluegill sunfish)        | No information available | No information available | 15.400 mg/l (methanol)   |
| Crustacea:                   | EC <sub>50</sub>              | 48 hours                 | <i>Daphnia magna</i>                                 | No information available | No information available | >10.0000 mg/l (methanol) |
| Algae/aquatic plants:        | IC <sub>50</sub>              | 8 days                   | <i>Pseudokirchneriella subcapitata</i> (green algae) | No information available | No information available | 22.000 mg/l (methanol)   |
| Other organisms              | -                             | -                        | -  | -                        | -                        | -                        |
| Chronic (long-term) toxicity | Dose                          | Exposure time            | Species  | Method                   | Evaluation               | Note                     |
| Fish                         | LC <sub>50</sub>              | 96 hours                 | No information available                             | No information available | No information available | -                        |
| Crustacea:                   | EC <sub>50</sub>              | 48 hours                 | No information available                             | No information available | No information available | -                        |
| Algae/aquatic plants:        | IC <sub>50</sub>              | 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 |                          | -                        |

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

**Biodegradation**

| % Degradation | Time (days) | Method                   | Evaluation               | Note                             |
|---------------|-------------|--------------------------|--------------------------|----------------------------------|
| 99%           | 30 days     | OECD Test Guideline 301D | No information available | readily biodegradable (methanol) |
|               |             |                          |                          |                                  |

**12.3. Bioaccumulative potential**

**Octanol-water partition coefficient (log Kow)**

| Value             | Concentration            | pH | °C | Method       | Evaluation               | Note                            |
|-------------------|--------------------------|----|----|--------------|--------------------------|---------------------------------|
| - 0.77 (methanol) | No information available | -  | -  | experimental | No information available | bioaccumulation is not expected |
|                   |                          |    |    |              |                          |                                 |

**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 <sub>50</sub> | No information available | No information available | No information available | No information available | -    |
| Chronic toxicity on crustacea (Daphnia) | EC <sub>50</sub> | 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:   |

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

Adsorption / desorption

| Transport  | A/D coefficient<br>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**

Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex III or a PBT/vPvB assessment was not conducted.

**12.6. Other adverse effects**

No information available

**SECTION 13. Disposal considerations**

**13.1. Waste treatment methods**

**13.1.1. Product/Packaging disposal:**

Waste material must be disposed of according to the national and local rules and regulations. Do not mix with other sorts of waste. 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 codes/waste designations according to Low:**

15 01 10\*: packaging that contains residual hazardous substances or is contaminated with hazardous substances

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|         |   |
|---------|---|
| 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:  |
|         | Disposal must be made according to official regulations.  |

**SECTION 14. Transport information**

|                               |   |
|-------------------------------|---|
|                               | Transporting/shipment by road (ADR)                 |
| UN number:                    | 1992  |
| UN proper shipping name:      | Flammable liquid, toxic, n.o.s. (methanol solution) |
| Transport hazard class(es):   | 3 (6.1)   |
| Packing group:                | II  |
| Environmental hazards:        | -   |
| Special precautions for user: | -   |
|                               | Transporting/shipment by rail (RID)                 |
| UN number:                    | 1992  |
| UN proper shipping name:      | Flammable liquid, toxic, n.o.s. (methanol solution) |
| Transport hazard class(es):   | 3 (6.1)   |
| Packing group:                | II  |
| Environmental hazards:        | -   |
| Special precautions for user: | -   |
|                               | Transporting/shipment by inland waterways (ADN)     |
| UN number:                    | 1992  |
| UN proper shipping name:      | Flammable liquid, toxic, n.o.s. (methanol solution) |
| Transport hazard class(es):   | 3 (6.1)   |
| Packing group:                | II  |
| Environmental hazards:        | -   |
| Special precautions for user: | -   |
|                               | Transporting/shipment by sea (IMDG)                 |
| UN number:                    | 1992  |
| UN proper shipping name:      | Flammable liquid, toxic, n.o.s. (methanol solution) |
| Transport hazard class(es):   | 3 (6.1)   |

|               |                               |                      |              |          |   |
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| Product code: | MG-OT-X**                     | Date of compilation: | 07 June 2019 | Version: | 5 |

|  |   |
|--|---|
| Packing group:   | II  |
| Environmental hazards:   | -   |
| 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:   | 1992  |
| UN proper shipping name:   | Flammable liquid, toxic, n.o.s. (methanol solution) |
| Transport hazard class(es):  | 3 (6.1)   |
| Packing group:   | II  |
| Environmental hazards:   | -   |
| 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   |
|                                    | Authorisations and/or restrictions on use  |
|                                    | Authorisations: -  |
|                                    | Restrictions: -  |
| Other EU regulations:              | EC Regulation No. 1906/2007 and EC Regulation No. 1272/2008 of the European Parliament and the European Council;<br>The European Commission Regulation No. 453/2006 of 2010 on changes and amendments to the Regulation (EC) No. 1907/2006 of the European Parliament and Council on registration, evaluation, authorization and restriction of chemical substances (REACH);<br>EC Regulation No. 2037/2000 of the European Parliament and Council of 29 June 2000 on ozone-depleting substances;<br>EC Regulation No. 689/2008 of the European Parliament and Council of 17 June 2008 concerning the export and import of dangerous chemicals;<br>EC Regulation No. 850/2004 of the European Parliament and Council of 29 April 2004 on persistent organic pollutants;<br>Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives |
|                                    | Information according 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline)   |



|               |                               |                      |              |          |   |
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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  |

| <b>SECTION 16. Other information</b>  |   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
|---|---|-----|-----------------------------------|------|---|------------------|------------------|------------------|---------------------------|---------|--|------|--|------|---|-----|---|
| 16.1. Indication of changes:  | -   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| 16.2. Abbreviations and acronyms:   | <table border="0"> <tr> <td>PBT</td> <td>Stable, bioaccumulative and toxic</td> </tr> <tr> <td>vPvB</td> <td>Strongly stable and strongly bioaccumulative.</td> </tr> <tr> <td>LD<sub>50</sub></td> <td>Lethal dose, 50%</td> </tr> <tr> <td>LC<sub>50</sub></td> <td>Lethal concentration, 50%</td> </tr> <tr> <td>STOT-SE</td> <td>Specific target organ toxicity – single exposure</td> </tr> <tr> <td>IMDG</td> <td>International Maritime Dangerous Goods</td> </tr> <tr> <td>IATA</td> <td>International Air Transport Association</td> </tr> <tr> <td>GHS</td> <td>Globally Harmonized System of Classification and Labelling of Chemicals</td> </tr> </table> | PBT | Stable, bioaccumulative and toxic | vPvB | Strongly stable and strongly bioaccumulative. | LD <sub>50</sub> | Lethal dose, 50% | LC <sub>50</sub> | Lethal concentration, 50% | STOT-SE | Specific target organ toxicity – single exposure | IMDG | International Maritime Dangerous Goods | IATA | International Air Transport Association | GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| PBT   | Stable, bioaccumulative and toxic   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| vPvB  | Strongly stable and strongly bioaccumulative.   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| LD <sub>50</sub>  | Lethal dose, 50%  |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| LC <sub>50</sub>  | Lethal concentration, 50%   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| STOT-SE   | Specific target organ toxicity – single exposure  |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| IMDG  | International Maritime Dangerous Goods  |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| IATA  | International Air Transport Association   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| GHS   | Globally Harmonized System of Classification and Labelling of Chemicals   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| 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<br>301+311+331<br>370  | Highly flammable liquid and vapor.<br>Toxic if swallowed, in contact with skin or if inhaled.<br>Causes damage to organs (eyes).  |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| 16.6. Training advice:  | -   |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |
| 16.7. Further information:  | ** "X" in the product code marks different volumes (different packaging of the product)<br>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.  |     |                                   |      |   |                  |                  |                  |                           |         |  |      |  |      |   |     |   |

|   |
|---|
| <b>ANNEX: Exposure scenario resulting to Chemical safety assessment</b> |
| -   |