

**GOLD SPRAY - 089040-NFDT-EN**



**SAFETY DATA SHEET**  
(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

**SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1. Product identifier**

Product name : GOLD SPRAY  
Product code : 089040-NFDT-EN.

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

Ideal for use on handicrafts (e.g. cones, cardboard, etc.), Christmas decorations and flower arrangements. Only use the product as directed on the aerosol.

**1.3. Details of the supplier of the safety data sheet**

Registered company name : Volcke Aerosol Company NV.  
Address : Industrielaan 15. B-8520. Kuurne. Belgium.  
Telephone : +32 (0) 56 35 17 23. Fax : +32 (0) 56 35 30 69.  
info@volcke-aerosol-connection.com  
http://www.volcke-aerosol-connection.com

**1.4. Emergency telephone number : +32 (0) 56 35 17 23.**

Association/Organisation : http://www.volcke-aerosol-connection.com.  
Hours of operation : Monday - Thursday : 8:00-17:00; Friday : 8:00-13:00

**Other emergency numbers**

United Kingdom : National Poisons Information Service : +44 (0)844 892 0111. Ireland : Poisons Information Centre of Ireland : +353 1 809 2166. Malta : Emergency number : 112 ; Medicines & Poisons info Office : 2545 6508.

**SECTION 2 : HAZARDS IDENTIFICATION**

**2.1. Classification of the substance or mixture**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Aerosol, Category 3 (Aerosol 3, H229).

Hazardous to the aquatic environment - Acute hazard, Category 1 (Aquatic Acute 1, H400).

Hazardous to the aquatic environment - Chronic hazard, Category 3 (Aquatic Chronic 3, H412).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

**2.2. Label elements**

Mixture for aerosol application.

**In compliance with EC regulation No. 1272/2008 and its amendments.**

Hazard pictograms :



GHS09

Signal Word :

WARNING

Additional labeling :

37% by mass of the contents are flammable.

Hazard statements :

H229 Pressurised container: May burst if heated.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements - General :

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

Precautionary statements - Prevention :

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P251 Do not pierce or burn, even after use.

P273 Avoid release to the environment.

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## Precautionary statements - Response :

P391 Collect spillage.

## Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

## Precautionary statements - Disposal :

P501 Dispose of container to an approved waste disposal plant.

**2.3. Other hazards**

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC)  $\geq 0.1\%$  published by the European Chemicals Agency (ECHA) under article 57 of REACH: <http://echa.europa.eu/fr/candidate-list-table>

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances  $\geq 0.1\%$  with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

Intentional misuse of the preparation by concentrating and inhaling the vapours can be harmful or fatal.

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures****Composition :**

| Identification   | (EC) 1272/2008   | Note            | %                   |
|--|--|-----------------|---------------------|
| EC: 918-167-1<br>REACH: 01-2119472146-39<br><br>HYDROCARBONS, C11-C12, ISOALKANES,<br>< 2 % AROMATICS  | GHS08, GHS02<br>Dgr<br>Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Aquatic Chronic 4, H413<br>EUH:066 |                 | 10 $\leq$ x % < 25  |
| CAS: 7440-50-8<br>EC: 231-159-6<br>REACH: 01-2119480154-42<br><br>COPPER POWDER                        | GHS09<br>Wng<br>Aquatic Chronic 2, H411<br>Aquatic Acute 1, H400<br>M Acute = 10                     | T<br>[1]        | 2.5 $\leq$ x % < 10 |
| CAS: 106-97-8<br>EC: 203-448-7<br>REACH: 01-2119474691-32-XXXX<br><br>BUTANE (< 0,1 % 1,3-BUTADIENE)   | GHS02<br>Dgr<br>Flam. Gas 1, H220<br>Press. Gas, H280  | C<br>[1]<br>[7] | 1 $\leq$ x % < 2.5  |
| CAS: 109-87-5<br>EC: 203-714-2<br>REACH: 01-2119664781-31<br><br>METHYLAL                              | GHS02<br>Dgr<br>Flam. Liq. 2, H225   | [1]             | 1 $\leq$ x % < 2.5  |
| CAS: 74-98-6<br>EC: 200-827-9<br>REACH: 01-2119486944-21-XXXX<br><br>PROPANE                           | GHS02<br>Dgr<br>Flam. Gas 1, H220<br>Press. Gas, H280  | [1]<br>[7]      | 1 $\leq$ x % < 2.5  |
| CAS: 107-41-5<br>EC: 203-489-0<br>REACH: 01-2119539582-35-XXXX<br><br>2-METHYLPENTANE-2,4-DIOL         | GHS07, GHS08<br>Wng<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d                   | [1]<br>[2]      | 0.1 $\leq$ x % < 1  |
| CAS: 7440-66-6<br>EC: 231-175-3<br>REACH: 01-2119467174-37<br><br>ZINC POWDER - ZINC DUST (STABILISED) | GHS09<br>Wng<br>Aquatic Acute 1, H400<br>M Acute = 1<br>Aquatic Chronic 1, H410<br>M Chronic = 1     |                 | 0.1 $\leq$ x % < 1  |
| CAS: 107-98-2<br>EC: 203-539-1<br>REACH: 01-2119457435-35<br><br>MONOPROPYLENE GLYCOL METHYL<br>ETHER  | GHS07, GHS02<br>Wng<br>Flam. Liq. 3, H226<br>STOT SE 3, H336   | [1]             | 0.1 $\leq$ x % < 1  |

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|  |   |          |                 |
|--|---|----------|-----------------|
| CAS: 68439-50-9<br>EC: 500-213-3<br>REACH: 01-2119487984-16<br><br>ALCOHOLS, C12-14, ETHOXYLATED | GHS05, GHS09<br>Dgr<br>Skin Corr. 1B, H314<br>Aquatic Chronic 3, H412<br>Aquatic Acute 1, H400<br>M Acute = 1 |          | 0.1 <= x % < 1  |
| INDEX: 601-022-00-9<br>CAS: 1330-20-7<br>EC: 215-535-7<br><br>XYLENE                             | GHS02, GHS07<br>Wng<br>Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Acute Tox. 4, H312<br>Skin Irrit. 2, H315  | C<br>[1] | 0 >= x % < 0.03 |

**Specific concentration limits:**

| Identification   | Specific concentration limits | ATE                       |
|--|-------------------------------|---------------------------|
| CAS: 109-87-5<br>EC: 203-714-2<br>REACH: 01-2119664781-31<br><br>METHYLAL                          |                               | oral: ATE = 6453 mg/kg BW |
| CAS: 107-98-2<br>EC: 203-539-1<br>REACH: 01-2119457435-35<br><br>MONOPROPYLENE GLYCOL METHYL ETHER |                               | oral: ATE = 4016 mg/kg BW |

**Information on ingredients :**

(Full text of H-phrases: see section 16)

[1] Substance for which maximum workplace exposure limits are available.

[2] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

[7] Propellant gas

**SECTION 4 : FIRST AID MEASURES**

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

**4.1. description of first aid measures**

**In the event of exposure by inhalation :**

In the event of massive inhalation, remove the person exposed to fresh air. Keep warm and at rest.

**In the event of splashes or contact with eyes :**

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

**In the event of splashes or contact with skin :**

Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**In the event of swallowing :**

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

See section 11.

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

If you feel unwell, seek medical advice (show the label if possible). If symptoms persist, always call a doctor.

**SECTION 5 : FIREFIGHTING MEASURES**

**5.1. Extinguishing media**

If the aerosols are exposed to a fire : keep containers cool by spraying with water from a protected position.

**Suitable methods of extinction**

In the event of a fire, use :

- sprayed water or water mist
- foam
- multipurpose ABC powder

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- BC powder
- carbon dioxide (CO<sub>2</sub>)

**Unsuitable methods of extinction**

In the event of a fire, do not use :

- water jet

**5.2. Special hazards arising from the substance or mixture**

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)
- nitrogen oxide (NO)
- nitrogen dioxide (NO<sub>2</sub>)

In a fire or if heated, a pressure increase will occur and the container may burst. Bursting aerosol containers may be propelled from a fire at high speed. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**5.3. Advice for firefighters**

If possible, stop the product stream. Spray from a protected position till the containers are cool. If possible, take the aerosols outside. Keep public at a distance.

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**SECTION 6 : ACCIDENTAL RELEASE MEASURES**

**6.1. Personal precautions, protective equipment and emergency procedures**

Consult the safety measures listed under headings 7 and 8.

**For first aid worker**

First aid workers will be equipped with suitable personal protective equipment (See section 8).

**6.2. Environmental precautions**

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

**6.3. Methods and material for containment and cleaning up**

Clean preferably with a detergent, do not use solvents.

**6.4. Reference to other sections**

No data available.

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**SECTION 7 : HANDLING AND STORAGE**

Requirements relating to storage premises apply to all facilities where the mixture is handled.

**7.1. Precautions for safe handling**

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

**Fire prevention :**

Handle in well-ventilated areas.

Do not pierce or burn, even after use.

Prevent access by unauthorised personnel.

**Recommended equipment and procedures :**

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

**Prohibited equipment and procedures :**

No smoking, eating or drinking in areas where the mixture is used.

**7.2. Conditions for safe storage, including any incompatibilities**

No data available.

**GOLD SPRAY - 089040-NFDT-EN****Storage**

Keep out of reach of children.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

Store upright.

**Packaging**

Always keep in packaging made of an identical material to the original.

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

No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters****Occupational exposure limits :**

- European Union (2022/431, 2019/1831, 2017/2398, 2017/164, 2009/161, 2006/15/CE, 2000/39/CE, 98/24/CE) :

| CAS       | VME-mg/m <sup>3</sup> : | VME-ppm : | VLE-mg/m <sup>3</sup> : | VLE-ppm : | Notes : |
|-----------|-------------------------|-----------|-------------------------|-----------|---------|
| 107-98-2  | 375                     | 100       | 568                     | 150       | Peau    |
| 1330-20-7 | 221                     | 50        | 442                     | 100       | Peau    |

- UK / WEL (Workplace exposure limits, EH40/2005, Fourth Edition 2020) :

| CAS       | TWA :                              | STEL :                             | Ceiling : | Definition : | Criteria : |
|-----------|------------------------------------|------------------------------------|-----------|--------------|------------|
| 7440-50-8 | 0.2 mg/m <sup>3</sup>              | -                                  | -         | -            | -          |
| 106-97-8  | 600 ppm<br>1450 mg/m <sup>3</sup>  | 750 ppm<br>1810 mg/m <sup>3</sup>  |           | Carc         |            |
| 109-87-5  | 1000 ppm<br>3160 mg/m <sup>3</sup> | 1250 ppm<br>3950 mg/m <sup>3</sup> |           |              |            |
| 107-41-5  | 25 ppm<br>123 mg/m <sup>3</sup>    | 25 ppm<br>123 mg/m <sup>3</sup>    |           |              |            |
| 107-98-2  | 100 ppm<br>375 mg/m <sup>3</sup>   | 150 ppm<br>560 mg/m <sup>3</sup>   |           | Sk           |            |
| 1330-20-7 | 50 ppm<br>220 mg/m <sup>3</sup>    | 100 ppm<br>441 mg/m <sup>3</sup>   |           | Sk. BMGV     |            |

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : AGW (DE) : 300 mg/m<sup>3</sup> (8 h)

- Ireland (Code of practice for the Chemical Agents Regulations, 2021) :

| CAS       | TWA :                              | STEL :                           | Ceiling : | Definition : | Criteria : |
|-----------|------------------------------------|----------------------------------|-----------|--------------|------------|
| 7440-50-8 | 0.2 mg/m <sup>3</sup>              | -                                | -         | -            | -          |
| 106-97-8  |                                    | 1000 ppm                         |           |              |            |
| 109-87-5  | 1000 ppm<br>3100 mg/m <sup>3</sup> |                                  |           |              |            |
| 74-98-6   |                                    |                                  |           | Asphx.       |            |
| 107-41-5  |                                    | 25 ppm<br>125 mg/m <sup>3</sup>  |           |              |            |
| 107-98-2  | 100 ppm<br>375 mg/m <sup>3</sup>   | 150 ppm<br>568 mg/m <sup>3</sup> |           |              |            |
| 1330-20-7 | 50 ppm<br>221 mg/m <sup>3</sup>    | 100 ppm<br>442 mg/m <sup>3</sup> |           |              |            |

- Malta (L.N. 353/2007) :

| CAS       | TWA :                            | STEL :                           | Ceiling : | Definition : | Criteria : |
|-----------|----------------------------------|----------------------------------|-----------|--------------|------------|
| 107-98-2  | 100 ppm<br>375 mg/m <sup>3</sup> | 150 ppm<br>568 mg/m <sup>3</sup> |           | Skin         |            |
| 1330-20-7 | 50 ppm<br>221 mg/m <sup>3</sup>  | 100 ppm<br>442 mg/m <sup>3</sup> |           | Skin         |            |

**Derived no effect level (DNEL) or derived minimum effect level (DMEL):**

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

**Final use:**

Exposure method:

Potential health effects:

DNEL :

**Workers.**

Dermal contact.

Long term systemic effects.

50.6 mg/kg body weight/day

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Exposure method: Inhalation.  
Potential health effects: Short term local effects.  
DNEL : 553.5 mg of substance/m3

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 369 mg of substance/m3

**Final use:** **Consumers.**  
Exposure method: Ingestion.  
Potential health effects: Long term systemic effects.  
DNEL : 3.3 mg/kg body weight/day

Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 18.1 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 43.9 mg of substance/m3

**2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)**

**Final use:** **Workers.**  
Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 63 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 44.43 mg of substance/m3

Exposure method: Inhalation.  
Potential health effects: Long term local effects.  
DNEL : 49 mg of substance/m3

Exposure method: Inhalation.  
Potential health effects: Short term local effects.  
DNEL : 98 mg of substance/m3

**Final use:** **Consumers.**  
Exposure method: Ingestion.  
Potential health effects: Long term systemic effects.  
DNEL : 2.25 mg/kg body weight/day

Exposure method: Dermal contact.  
Potential health effects: Long term systemic effects.  
DNEL : 22.5 mg/kg body weight/day

Exposure method: Inhalation.  
Potential health effects: Long term systemic effects.  
DNEL : 7.83 mg of substance/m3

Exposure method: Inhalation.  
Potential health effects: Long term local effects.  
DNEL : 25 mg of substance/m3

Exposure method: Inhalation.  
Potential health effects: Short term local effects.  
DNEL : 49 mg of substance/m3

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**METHYLAL (CAS: 109-87-5)**

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
17.9 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term systemic effects.  
126.6 mg of substance/m3

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Long term systemic effects.  
18.1 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
18.1 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term systemic effects.  
31.5 mg of substance/m3

**COPPER POWDER (CAS: 7440-50-8)**

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Workers.**

Dermal contact.  
Long term systemic effects.  
137 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Short term systemic effects.  
273 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term systemic effects.  
1240 mg of substance/m3

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Long term local effects.  
1 mg of substance/m3

Exposure method:  
Potential health effects:  
DNEL :

Inhalation.  
Short term local effects.  
1 mg of substance/m3

**Final use:**

Exposure method:  
Potential health effects:  
DNEL :

**Consumers.**

Ingestion.  
Long term systemic effects.  
0.041 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Long term systemic effects.  
137 mg/kg body weight/day

Exposure method:  
Potential health effects:  
DNEL :

Dermal contact.  
Short term systemic effects.  
273 mg/kg body weight/day

Exposure method:

Inhalation.

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|   |  |
|---|--|
| Potential health effects:<br>DNEL :                     | Long term systemic effects.<br>1240 mg of substance/m3           |
| Exposure method:<br>Potential health effects:<br>DNEL : | Inhalation.<br>Short term local effects.<br>1 mg of substance/m3 |
| Exposure method:<br>Potential health effects:<br>DNEL : | Inhalation.<br>Short term local effects.<br>1 mg of substance/m3 |

**Predicted no effect concentration (PNEC):**

**MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)**

|                                      |  |
|--------------------------------------|--|
| Environmental compartment:<br>PNEC : | Soil.<br>4.59 mg/kg                      |
| Environmental compartment:<br>PNEC : | Fresh water.<br>10 mg/l                  |
| Environmental compartment:<br>PNEC : | Sea water.<br>1 mg/l                     |
| Environmental compartment:<br>PNEC : | Intermittent waste water.<br>100 mg/l    |
| Environmental compartment:<br>PNEC : | Fresh water sediment.<br>52.3 mg/kg      |
| Environmental compartment:<br>PNEC : | Marine sediment.<br>5.2 mg/kg            |
| Environmental compartment:<br>PNEC : | Waste water treatment plant.<br>100 mg/l |

**2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)**

|                                      |   |
|--------------------------------------|---|
| Environmental compartment:<br>PNEC : | Soil.<br>0.066 mg/kg                    |
| Environmental compartment:<br>PNEC : | Fresh water.<br>0.429 mg/l              |
| Environmental compartment:<br>PNEC : | Sea water.<br>0.0429 mg/l               |
| Environmental compartment:<br>PNEC : | Intermittent waste water.<br>4.29 mg/l  |
| Environmental compartment:<br>PNEC : | Fresh water sediment.<br>1.59 mg/kg     |
| Environmental compartment:<br>PNEC : | Marine sediment.<br>0.159 mg/kg         |
| Environmental compartment:<br>PNEC : | Waste water treatment plant.<br>20 mg/l |

**METHYLAL (CAS: 109-87-5)**

|                                      |                       |
|--------------------------------------|-----------------------|
| Environmental compartment:<br>PNEC : | Soil.<br>4.6538 mg/kg |
|--------------------------------------|-----------------------|



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|                                      |  |
|--------------------------------------|--|
| Environmental compartment:<br>PNEC : | Fresh water.<br>14.577 mg/l            |
| Environmental compartment:<br>PNEC : | Sea water.<br>1.477 mg/l               |
| Environmental compartment:<br>PNEC : | Fresh water sediment.<br>13.135 mg/kg  |
| Environmental compartment:<br>PNEC : | Marine sediment.<br>1.3135 mg/kg       |
| Environmental compartment:<br>PNEC : | Waste water treatment plant.<br>10 g/l |

**COPPER POWDER (CAS: 7440-50-8)**

|                                      |  |
|--------------------------------------|--|
| Environmental compartment:<br>PNEC : | Soil.<br>65.5 mg/kg                      |
| Environmental compartment:<br>PNEC : | Fresh water.<br>7.8 µg/l                 |
| Environmental compartment:<br>PNEC : | Sea water.<br>5.2 µg/l                   |
| Environmental compartment:<br>PNEC : | Fresh water sediment.<br>87 mg/kg        |
| Environmental compartment:<br>PNEC : | Marine sediment.<br>676 mg/kg            |
| Environmental compartment:<br>PNEC : | Waste water treatment plant.<br>230 µg/l |

## 8.2. Exposure controls

### Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

#### - Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

Do not spray in the direction of the eyes.

#### - Hand protection

Type of gloves recommended :

- Natural latex
- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVC (polyvinyl chloride)
- Butyl Rubber (Isobutylene-isoprene copolymer)

Not necessary at efficient use. Wash your hands after contact with skin.

#### - Body protection

Work clothing worn by personnel shall be laundered regularly.

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After contact with the product, all parts of the body that have been soiled must be washed.

Not necessary at efficient use. Wash skin that has been in contact with the product, with water and soap.

**- Respiratory protection**

Anti-gas and vapour filter(s) (Combined filters) in accordance with standard EN14387 :

- A1 (Brown)

Do not breathe spray. Use only in well-ventilated areas.

**Exposure controls linked to environmental protection**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

**Physical state**

Physical state : Fluid liquid.  
Spray.

**Colour**

Gold

**Odour**

Odour threshold : Not stated.

Odour : Specific

**Freezing point**

Freezing point / Freezing range : Not stated.

**Boiling point or initial boiling point and boiling range**

Boiling point/boiling range : Not relevant.

**Flammability**

Flammability (solid, gas) : Not stated.

Flammability : Not applicable

**Lower and upper explosion limit**

Explosive properties, lower explosivity limit (%) : Not stated.

Explosive properties, upper explosivity limit (%) : Not stated.

**Flash point**

Flash point interval : Not relevant.

**Auto-ignition temperature**

Self-ignition temperature : Not relevant.

**Decomposition temperature**

Decomposition point/decomposition range : Not relevant.

**pH**

pH (aqueous solution) : Not stated.

pH : 7.00 .

Neutral.

**Kinematic viscosity**

Viscosity : Not stated.

**Solubility**

Water solubility : Soluble.

Fat solubility : Not stated.

**Partition coefficient n-octanol/water (log value)**

Partition coefficient: n-octanol/water : Not stated.

**Vapour pressure**

Vapour pressure (50°C) : Not relevant.

**Density and/or relative density**

Density : 0.952

**Relative vapour density**

Vapour density : Not stated.

**9.2. Other information**

VOC (g/l) : 311.72

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Pressure at 20°C :  $\pm 6.0$  bar  
Pressure at 50°C :  $< 12$  bar  
Water content : Water-based formulation

**9.2.1. Information with regard to physical hazard classes**

No data available.

**Aerosols**

Chemical combustion heat :  $< 20$  kJ/g.  
Inflammation time :  $> 300$  s/m<sup>3</sup>.  
Ignition distance : No ignition

**9.2.2. Other safety characteristics**

No data available.

**SECTION 10 : STABILITY AND REACTIVITY**

**10.1. Reactivity**

No data available.

**10.2. Chemical stability**

This mixture is stable under the recommended handling and storage conditions in section 7.

**10.3. Possibility of hazardous reactions**

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4. Conditions to avoid**

Avoid :

- frost
- heat
- flames and hot surfaces

Protect from sunlight and do not expose to temperatures exceeding 50°C. Keep away from heat and sources of ignition. Storage in a dry, frost-free and well ventilated place.

**10.5. Incompatible materials**

No materials known by which a dangerous reaction can occur.

**10.6. Hazardous decomposition products**

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)
- nitrogen oxide (NO)
- nitrogen dioxide (NO<sub>2</sub>)

The product is stable. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11 : TOXICOLOGICAL INFORMATION**

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

Splashes in the eyes may cause irritation and reversible damage

**11.1.1. Substances**

**Acute toxicity :**

PROPANE (CAS: 74-98-6)

Inhalation route (Dusts/mist) : LC<sub>50</sub>  $> 10$  mg/l

BUTANE ( $< 0,1$  % 1,3-BUTADIENE) (CAS: 106-97-8)

Inhalation route (Vapours) : LC<sub>50</sub>  $> 10$  mg/l

ALCOHOLS, C12-14, ETHOXYLATED (CAS: 68439-50-9)

Oral route : LD<sub>50</sub>  $> 2000$  mg/kg  
Species : Rat

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

Oral route : LD<sub>50</sub> = 4016 mg/kg  
Species : Rat

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|   |   |
|---|---|
|   | OECD Guideline 401 (Acute Oral Toxicity)  |
| Dermal route :  | LD50 > 2000 mg/kg<br>Species : Rabbit<br>OECD Guideline 402 (Acute Dermal Toxicity)                               |
| Inhalation route (Vapours) :                          | LC50 > 25.8 mg/l<br>Species : Rat<br>OECD Guideline 403 (Acute Inhalation Toxicity)<br>Duration of exposure : 4 h |
| ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6) |   |
| Oral route :  | LD50 > 2000 mg/kg<br>Species : Rat<br>OECD Guideline 401 (Acute Oral Toxicity)                                    |
| Inhalation route (Dusts/mist) :                       | LC50 > 5410 mg/m3<br>Species : Rat<br>OECD Guideline 403 (Acute Inhalation Toxicity)                              |
| 2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)              |   |
| Oral route :  | LD50 > 2000 mg/kg<br>Species : Rat<br>OECD Guideline 420 (Acute Oral ToxicityFixed Dose Method)                   |
| Dermal route :  | LD50 >= 2000 mg/kg<br>Species : Rat<br>OECD Guideline 402 (Acute Dermal Toxicity)                                 |
| Inhalation route (Vapours) :                          | LC50 > 55 mg/l<br>Species : Rat<br>OECD Guideline 403 (Acute Inhalation Toxicity)<br>Duration of exposure : 4 h   |
| METHYLAL (CAS: 109-87-5)                              |   |
| Oral route :  | LD50 = 6453 mg/kg<br>Species : Rat<br>OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)            |
| Dermal route :  | LD50 > 5000 mg/kg<br>Species : Rabbit<br>OECD Guideline 402 (Acute Dermal Toxicity)                               |
| HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS    |   |
| Oral route :  | LD50 > 5000 mg/kg<br>Species : Rat<br>OECD Guideline 401 (Acute Oral Toxicity)                                    |
| Dermal route :  | LD50 > 5000 mg/kg<br>Species : Rabbit<br>OECD Guideline 402 (Acute Dermal Toxicity)                               |
| Inhalation route (Dusts/mist) :                       | LC50 > 5.6 mg/l<br>Species : Rat<br>OECD Guideline 403 (Acute Inhalation Toxicity)<br>Duration of exposure : 4 h  |

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**Skin corrosion/skin irritation :**

Methylal : Not irritating. Repeated or prolonged skin contact may cause dermatitis and defatting.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Not classified as skin corrosive/irritant but marked with EUH066.

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

Alcohols, C12-14, ethoxylated : Corrosive to skin.

2-Methylpentane-2,4-diol : Irritating to skin. Product is being absorbed through the skin.

Monopropylene glycol methyl ether : Repeated or prolonged skin contact may cause dermatitis and defatting.

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

Corrosivity :

No observed effect.

Species : Rabbit

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

METHYLAL (CAS: 109-87-5)

Species : Rabbit

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Irritation :

Average score = 4.2

Effect observed : Primary dermal irritation index (PDII)

Species : Rabbit

Duration of exposure : 72 h

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious damage to eyes/eye irritation :**

Methylal : Not irritating.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Not classified as damaging or irritant to eyes.

Alcohols, C12-14, ethoxylated : Causes serious eye damage.

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

2-Methylpentane-2,4-diol : Irritating to eyes.

Monopropylene glycol methyl ether : May be irritating to eyes.

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

METHYLAL (CAS: 109-87-5)

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

Corneal haze :

Average score = 0

Species : Rabbit

Duration of exposure : 72 h

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Iritis :

Average score = 0

Species : Rabbit

Duration of exposure : 72 h

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Conjunctival redness :

Average score = 0

Species : Rabbit

Duration of exposure : 72 h

OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Conjunctival oedema :

Average score = 0

Species : Rabbit

Duration of exposure : 72 h

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OECD Guideline 405 (Acute Eye Irritation / Corrosion)

**Respiratory or skin sensitisation :**

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

Alcohols, C12-14, ethoxylated : Not sensitizing.

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

Guinea Pig Maximisation Test (GMPT) : Non-sensitiser.  
Species : Guinea pig

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

Guinea Pig Maximisation Test (GMPT) : Non-sensitiser.  
Species : Guinea pig  
OECD Guideline 406 (Skin Sensitisation)

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

Guinea Pig Maximisation Test (GMPT) : Non-sensitiser.  
Species : Guinea pig  
OECD Guideline 406 (Skin Sensitisation)

METHYLAL (CAS: 109-87-5)

Local lymph node stimulation test : Non-Sensitiser.  
OECD Guideline 406 (Skin Sensitisation)

Guinea Pig Maximisation Test (GMPT) :

Non-sensitiser.  
Species : Guinea pig  
OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity :**

ALCOHOLS, C12-14, ETHOXYLATED (CAS: 68439-50-9)

No mutagenic effect.

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

No mutagenic effect.

ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6)

No mutagenic effect.

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

No mutagenic effect.

OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Ames test (in vitro) :

Negative.  
With or without metabolic activation.  
Species : S. typhimurium TA1535

PROPANE (CAS: 74-98-6)

No mutagenic effect.

METHYLAL (CAS: 109-87-5)

No mutagenic effect.

Mutagenesis (in vivo) :

Negative.  
Species : Mouse  
OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Mutagenesis (in vitro) :

Negative.  
Species : Mammalian Cell Line

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OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No mutagenic effect.

COPPER POWDER (CAS: 7440-50-8)

No mutagenic effect.

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

No mutagenic effect.

Mutagenesis (in vivo) :

Negative.

Species : Rat

OECD Guideline 478 (Genetic Toxicology: Rodent Dominant Lethal Test)

Mutagenesis (in vitro) :

Negative.

Species : Bacteria

OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Species : S. typhimurium TA102

**Carcinogenicity :**

Alcohols, C12-14, ethoxylated : No known significant effects or critical hazards.

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

PROPANE (CAS: 74-98-6)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

METHYLAL (CAS: 109-87-5)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

COPPER POWDER (CAS: 7440-50-8)

Carcinogenicity Test :

Negative.

No carcinogenic effect.

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

Carcinogenicity Test :

Negative.

No carcinogenic effect.

OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Reproductive toxicant :**

Alcohols, C12-14, ethoxylated : No known significant effects or critical hazards.

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

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No toxic effect for reproduction

ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6)

No toxic effect for reproduction

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

No toxic effect for reproduction

Suspected of damaging the unborn child.

PROPANE (CAS: 74-98-6)

No toxic effect for reproduction

METHYLAL (CAS: 109-87-5)

No toxic effect for reproduction

OECD Guideline 414 (Prenatal Developmental Toxicity Study)

BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)

No toxic effect for reproduction

COPPER POWDER (CAS: 7440-50-8)

No toxic effect for reproduction

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

No toxic effect for reproduction

Study on fertility :

Species : Rat

OECD Guideline 414 (Prenatal Developmental Toxicity Study)

Study on development :

Species : Rat

OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

**Specific target organ systemic toxicity - single exposure :**

Methylal : To human : Not classified for organ toxicity. For animals : No effects known.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Not classified as toxic to a target organ.

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

Monopropylene glycol methyl ether : To human : Respiratory tract irritation.

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

2-Methylpentane-2,4-diol : To human : Not classified for organ toxicity. For animals : No effects known.

**Specific target organ systemic toxicity - repeated exposure :**

Methylal : To human : Not classified for organ toxicity. For animals : No effects known.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Not classified as toxic to a target organ.

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

Monopropylene glycol methyl ether : To human : Not classified for organ toxicity. By male rats : Target organ : Kidneys.

Butane/Isobutane/Propane : Based on available data, the classification criteria are not met.

2-Methylpentane-2,4-diol : To human : Not classified for organ toxicity. For animals : No effects known.

METHYLAL (CAS: 109-87-5)

Inhalation route :

C = 6.3 mg/litre/6h/day

Species : Rat

Duration of exposure : 90 days

OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)

ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6)

Oral route :

C = 31.52 mg/kg bodyweight/day

Species : Rat

Duration of exposure : 90 days

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

Oral route :

C = 450 mg/kg bodyweight/day

Species : Rat



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Duration of exposure : 90 days  
OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS  
OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)  
OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)

**Aspiration hazard :**

Methylal : Not considered hazardous.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : In case of swallowing or vomiting product can enter airways and can cause chemical pneumonitis and pulmonary oedema.

Copper powder : Not classified.

Zinc powder - zinc dust (stabilised) : Not classified.

Monopropylene glycol methyl ether : Not considered hazardous.

Butane/Isobutane/Propane : Not applicable to gases and gas mixtures.

2-Methylpentane-2,4-diol : Not considered hazardous.

**11.1.2. Mixture**

No toxicological data available for the mixture.

**11.2. Information on other hazards**

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**SECTION 12 : ECOLOGICAL INFORMATION**

Very toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

**12.1. Toxicity**

**12.1.1. Substances**

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

Fish toxicity : LC50 >= 1000 mg/l  
Species : Oncorhynchus mykiss  
Duration of exposure : 96 h  
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 > 21100 mg/l  
Species : Daphnia magna  
Duration of exposure : 48 h

Algae toxicity : EC50 mg/l  
Species : Pseudokirchnerella subcapitata  
Duration of exposure : 7 days

ZINC POWDER - ZINC DUST (STABILISED) (CAS: 7440-66-6)

Fish toxicity : LC50 = 0.439 mg/l  
Factor M = 1  
Species : Others  
Duration of exposure : 96 h

NOEC = 0.169 mg/l  
Species : Others  
Duration of exposure : 28 days

Crustacean toxicity : EC50 = 2.5245 mg/l  
Duration of exposure : 48 h  
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

NOEC = 0.100 mg/l  
Factor M = 1  
Species : Daphnia magna

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|  |   |
|--|---|
|  | Duration of exposure : 21 days  |
| Algae toxicity :                                   | ECr50 = 0.1075 mg/l<br>Factor M = 1<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h<br><br>NOEC = 0.024 mg/l<br>Factor M = 1<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h<br>OECD Guideline 201 (Alga, Growth Inhibition Test)                 |
| 2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)           |   |
| Fish toxicity :                                    | LC50 = 8510 mg/l<br>Species : Gambusia affinis<br>Duration of exposure : 96 h<br>OECD Guideline 203 (Fish, Acute Toxicity Test)   |
| Crustacean toxicity :                              | EC50 = 5410 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 48 h<br>OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)  |
| Algae toxicity :                                   | ECr50 > 429 mg/l<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h<br>OECD Guideline 201 (Alga, Growth Inhibition Test)<br><br>NOEC = 429 mg/l<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h<br>OECD Guideline 201 (Alga, Growth Inhibition Test) |
| METHYLAL (CAS: 109-87-5)                           |   |
| Fish toxicity :                                    | LC50 = 6990 mg/l<br>Species : Pimephales promelas<br>Duration of exposure : 96 h<br>OECD Guideline 203 (Fish, Acute Toxicity Test)<br><br>NOEC = 450.281 mg/l<br>Duration of exposure : 28 days   |
| Crustacean toxicity :                              | EC50 > 1200 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 48 h<br>OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)<br><br>NOEC = 150.5 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 28 days  |
| Algae toxicity :                                   | ECr50 = 9120 mg/l<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h  |
| HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS |   |
| Fish toxicity :                                    | LC50 > 1000 mg/l<br>Species : Oncorhynchus mykiss   |

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|                                |   |
|--------------------------------|---|
|                                | Duration of exposure : 96 h<br>OECD Guideline 203 (Fish, Acute Toxicity Test)   |
|                                | NOEC = 0.209 mg/l<br>Species : Oncorhynchus mykiss<br>Duration of exposure : 28 days  |
| Crustacean toxicity :          | EC50 > 1000 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 48 h<br>OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)          |
|                                | NOEC > 1 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 21 days<br>OECD Guideline 211 (Daphnia magna Reproduction Test)                |
| Algae toxicity :               | ECr50 > 1000 mg/l<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h<br>OECD Guideline 201 (Alga, Growth Inhibition Test) |
| COPPER POWDER (CAS: 7440-50-8) |   |
| Fish toxicity :                | LC50 = 0.0112 mg/l<br>Factor M = 10<br>Species : Pimephales promelas<br>Duration of exposure : 96 h   |
| Crustacean toxicity :          | EC50 = 0.03 mg/l<br>Species : Daphnia magna<br>Duration of exposure : 48 h  |
| Algae toxicity :               | ECr50 = 0.048 mg/l<br>Species : Pseudokirchnerella subcapitata<br>Duration of exposure : 72 h   |

#### 12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

#### 12.2. Persistence and degradability

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Inherently biologically degradable. Transformation due to hydrolysis and due to photolysis is not expected to be significant. Expected to degrade rapidly in air.

##### 12.2.1. Substances

|   |  |
|---|--|
| ALCOHOLS, C12-14, ETHOXYLATED (CAS: 68439-50-9)   |  |
| Biodegradability :                                | Rapidly degradable.                    |
| MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2) |  |
| Biodegradability :                                | Rapidly degradable.<br>DBO5/DCO = 0.96 |
| 2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)          |  |
| Biodegradability :                                | Rapidly degradable.<br>DBO5/DCO = 0.81 |
| PROPANE (CAS: 74-98-6)                            |  |
| Biodegradability :                                | Rapidly degradable.                    |
| METHYLAL (CAS: 109-87-5)                          |  |
| Biodegradability :                                | Non-rapidly degradable.                |
| BUTANE (< 0,1 % 1,3-BUTADIENE) (CAS: 106-97-8)    |  |

**GOLD SPRAY - 089040-NFDT-EN**

Biodegradability : Rapidly degradable.

COPPER POWDER (CAS: 7440-50-8)

Biodegradability : Rapidly degradable.

HYDROCARBONS, C11-C12, ISOALKANES, < 2 % AROMATICS

Biodegradability : Non-rapidly degradable.  
DBO5/DCO = 0.31

### 12.3. Bioaccumulative potential

Butane/Isobutane/Propane : Not expected to be dangerous for the aquatic environment.

Methylal : No data available.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Not determined.

Alcohols, C12-14, ethoxylated : No data available.

Copper powder : No data available.

Zinc powder - zinc dust (stabilised) : No data available.

Monopropylene glycol methyl ether : No bioaccumulation.

2-Methylpentane-2,4-diol : Bioaccumulation not expected.

#### 12.3.1. Substances

MONOPROPYLENE GLYCOL METHYL ETHER (CAS: 107-98-2)

Octanol/water partition coefficient :  $\log K_{ow} = 0.37$

Bioaccumulation :  $BCF < 100$

2-METHYLPENTANE-2,4-DIOL (CAS: 107-41-5)

Octanol/water partition coefficient :  $\log K_{ow} = 0.58$

METHYLAL (CAS: 109-87-5)

Octanol/water partition coefficient :  $\log K_{ow} = 0$

### 12.4. Mobility in soil

Butane/Isobutane/Propane : If released into the environment, the product will rapidly disperse into the atmosphere where it will undergo photochemical degradation.

Methylal : No data available.

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Leaking material can soak in the sediment layer and cause soil and groundwater contamination.

Alcohols, C12-14, ethoxylated : No data available.

Copper powder : No data available.

Zinc powder - zinc dust (stabilised) : No data available.

Monopropylene glycol methyl ether : Product completely soluble in water.

2-Methylpentane-2,4-diol : Product completely soluble in water.

### 12.5. Results of PBT and vPvB assessment

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : PBT/vPvB : No.

Alcohols, C12-14, ethoxylated : PBT/vPvB : No.

Methylal : PBT/vPvB : No.

Copper powder : PBT/vPvB : No.

Zinc powder - zinc dust (stabilised) : PBT/vPvB : No.

Monopropylene glycol methyl ether : PBT/vPvB : No.

Butane/Isobutane/Propane : Not considered to be a PBT or a vPvB.

2-Methylpentane-2,4-diol : PBT/vPvB : No.

### 12.6. Endocrine disrupting properties

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

2-Methylpentane-2,4-diol : No information available about endocrine disrupting properties for the environment.

Butane/Isobutane/Propane : Not applicable.

Methylal : No additional information available.

Monopropylene glycol methyl ether : No information available about endocrine disrupting properties for the environment.

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**12.7. Other adverse effects**

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Flowing product can lead to an accumulation of a film on the water surface that reduces the oxygen exchange and can lead to the death of organisms.

Butane/Isobutane/Propane : Not applicable.

2-Methylpentane-2,4-diol : Do not flush into surface water or sanitary sewer system. Avoid penetrating into the soil.

Methylal : Avoid release to the environment.

Monopropylene glycol methyl ether : Do not flush into surface water or sanitary sewer system. Avoid penetrating into the soil.

Alcohols, C12-14, ethoxylated : No known significant effects or critical hazards.

Copper powder : No data available.

Zinc powder - zinc dust (stabilised) : No data available.

**SECTION 13 : DISPOSAL CONSIDERATIONS**

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

**13.1. Waste treatment methods**

Do not pour into drains or waterways.

**Waste :**

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Recycle or dispose of waste in compliance with current legislation, namely the Ordinance on the Avoidance and Disposal of Waste (Waste Ordinance, VVEA, SR 814.600), the Ordinance on Waste from June 22, 2005 (VeVA, SR 814, 610) and DETEC Ordinance on Waste Lists.

Disposal of the product (the unused product, residual quantities, the cured product, emptied but uncleaned packaging) : preferably by an approved waste collector or a specialist disposal company. Suitable containers and methods of waste treatment should be used.

**Soiled packaging :**

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

**Codes of wastes (Decision 2014/955/EC, Directive 2008/98/EEC on hazardous waste) :**

15 01 10 \* packaging containing residues of or contaminated by dangerous substances

**SECTION 14 : TRANSPORT INFORMATION**

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

**14.1. UN number or ID number**

1950

**14.2. UN proper shipping name**

UN1950=AEROSOLS, asphyxiant

**14.3. Transport hazard class(es)**

- Classification :

2.2

ADR/RID Label : Limited Quantity : 2.2 is not applicable.

**14.4. Packing group**

-

**14.5. Environmental hazards**

- Environmentally hazardous material :



The symbol above is not applicable for "Limited Quantity".

**14.6. Special precautions for user**

| ADR/RID | Class | Code    | Pack gr. | Label | Ident. | LQ      | Provis.         | EQ               | Cat.        | Tunnel |
|---------|-------|---------|----------|-------|--------|---------|-----------------|------------------|-------------|--------|
|         | 2     | 5A      | -        | 2.2   | -      | 1 L     | 190 327 344 625 | E0               | 3           | E      |
| IMDG    | Class | 2°Label | Pack gr. | LQ    | EMS    | Provis. | EQ              | Stowage Handling | Segregation |        |

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|      |       |          |          |           |          |                                  |        |                       |      |
|------|-------|----------|----------|-----------|----------|----------------------------------|--------|-----------------------|------|
|      | 2     | See SP63 | -        | See SP277 | F-D. S-U | 63 190 277<br>327 344 381<br>959 | E0     | - SW1 SW22            | SG69 |
| IATA | Class | 2°Label  | Pack gr. | Passager  | Passager | Cargo                            | Cargo  | note                  | EQ   |
|      | 2.2   | -        | -        | 203       | 75 kg    | 203                              | 150 kg | A98 A145<br>A167 A802 | E0   |
|      | 2.2   | -        | -        | Y203      | 30 kg G  | -                                | -      | A98 A145<br>A167 A802 | E0   |

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):(copper powder)

**14.7. Maritime transport in bulk according to IMO instruments**

No data available.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****- Classification and labelling information included in section 2:**

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

**- Container information:**

No data available.

**-Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):**

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):  
<https://echa.europa.eu/substances-restricted-under-reach>.

**- Particular provisions :**

Labelling following EU Regulation No. 517/2014 :

Contains fluorinated greenhouse gases : HFC-152a.

**15.2. Chemical safety assessment**

A chemical safety assessment has been carried out for the following products or for the substances in these products :

Methylal

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics

Alcohols, C12-14, ethoxylated

Copper powder

Zinc powder - zinc dust (stabilised)

Monopropylene glycol methyl ether

2-Methylpentane-2,4-diol

**SECTION 16 : OTHER INFORMATION**

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

**Wording of the phrases mentioned in section 3 :**

|       |   |
|-------|---|
| H220  | Extremely flammable gas.                              |
| H225  | Highly flammable liquid and vapour.                   |
| H226  | Flammable liquid and vapour.                          |
| H280  | Contains gas under pressure; may explode if heated.   |
| H304  | May be fatal if swallowed and enters airways.         |
| H312  | Harmful in contact with skin.                         |
| H314  | Causes severe skin burns and eye damage.              |
| H315  | Causes skin irritation.                               |
| H319  | Causes serious eye irritation.                        |
| H332  | Harmful if inhaled.                                   |
| H336  | May cause drowsiness or dizziness.                    |
| H361d | Suspected of damaging the unborn child.               |
| H400  | Very toxic to aquatic life.                           |
| H410  | Very toxic to aquatic life with long lasting effects. |

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|        |   |
|--------|---|
| H411   | Toxic to aquatic life with long lasting effects.        |
| H412   | Harmful to aquatic life with long lasting effects.      |
| H413   | May cause long lasting harmful effects to aquatic life. |
| EUH066 | Repeated exposure may cause skin dryness or cracking.   |

**Abbreviations :**

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.  
 LC50 : The concentration of a test substance resulting in 50% lethality in a given period.  
 EC50 : The effective concentration of substance that causes 50% of the maximum response.  
 ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.  
 NOEC : The concentration with no observed effect.  
 REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.  
 ATE : Acute Toxicity Estimate  
 BW : Body Weight  
 DNEL : Derived No-Effect Level  
 PNEC : Predicted No-Effect Concentration  
 CMR: Carcinogenic, mutagenic or reprotoxic.  
 STEL : Short-term exposure limit  
 TWA : Time Weighted Averages  
 TLV : Threshold Limit Value (exposure)  
 AEV : Average Exposure Value.  
 ADR : European agreement concerning the international carriage of dangerous goods by Road.  
 IMDG : International Maritime Dangerous Goods.  
 IATA : International Air Transport Association.  
 ICAO : International Civil Aviation Organisation  
 RID : Regulations concerning the International carriage of Dangerous goods by rail.  
 WGK : Wassergefährdungsklasse (Water Hazard Class).  
 GHS09 : Environment  
 PBT: Persistent, bioaccumulable and toxic.  
 vPvB : Very persistent, very bioaccumulable.  
 SVHC : Substances of very high concern.

**Difference Report**

Revision: N°8 (22/03/2023) / GHS n°5 / HCS n° / Version: N°1 (22/03/2023)

~~Revision: N°7 (07/12/2021) / GHS n°4 / HCS n° / Version: N°2 (07/12/2021)~~

**SECTION 2 : HAZARDS IDENTIFICATION**

**In compliance with EC regulation No. 1272/2008 and its amendments.**

The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

**SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS**

**Composition :**

|  |  |            |                 |
|--|--|------------|-----------------|
| CAS: 107-41-5<br>EC: 203-489-0<br>REACH: 01-2119539582-35-XXXX | GHS07, GHS08<br>Wng<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d                           | [1]<br>[2] | 1 <= x % < 2.5  |
| <del>2-METHYLPENTANE-2,4-DIOL</del>                            |  |            |                 |
| CAS: 7440-66-6<br>EC: 231-175-3<br>REACH: 01-2119467174-37     | GHS09<br>Wng<br>Aquatic Acute 1, H400<br>M Acute = 1<br>Aquatic Chronic 1, H410<br>M Chronic = 1             |            | 1 <= x % < 2.5  |
| <del>ZINC POWDER - ZINC DUST (STABILISED)</del>                |  |            |                 |
| INDEX: 601-022-00-9<br>CAS: 1330-20-7<br>EC: 215-535-7         | GHS02, GHS07<br>Wng<br>Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Acute Tox. 4, H312<br>Skin Irrit. 2, H315 | C<br>[1]   | 0 >= x % < 0.05 |
| XYLENE   |  |            |                 |

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|  |  |            |                 |
|--|--|------------|-----------------|
| CAS: 107-41-5<br>EC: 203-489-0<br>REACH: 01-2119539582-35-XXXX<br>2-METHYLPENTANE-2,4-DIOL         | GHS07, GHS08<br>Wng<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d                           | [1]<br>[2] | 0.1 <= x % < 1  |
| CAS: 7440-66-6<br>EC: 231-175-3<br>REACH: 01-2119467174-37<br>ZINC POWDER - ZINC DUST (STABILISED) | GHS09<br>Wng<br>Aquatic Acute 1, H400<br>M Acute = 1<br>Aquatic Chronic 1, H410<br>M Chronic = 1             |            | 0.1 <= x % < 1  |
| INDEX: 601-022-00-9<br>CAS: 1330-20-7<br>EC: 215-535-7<br>XYLENE                                   | GHS02, GHS07<br>Wng<br>Flam. Liq. 3, H226<br>Acute Tox. 4, H332<br>Acute Tox. 4, H312<br>Skin Irrit. 2, H315 | C<br>[1]   | 0 >= x % < 0.03 |

**SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES**

**Physical state**

Spray.

**SECTION 11 : TOXICOLOGICAL INFORMATION**

**Respiratory or skin sensitisation :**

~~2-Methylpentane-2,4-diol : Not sensitizing.~~

**Germ cell mutagenicity :**

~~2-Methylpentane-2,4-diol : Not classified for mutagenic.~~

**Carcinogenicity :**

~~2-Methylpentane-2,4-diol : Not classified for carcinogenicity.~~

**Reproductive toxicant :**

~~2-Methylpentane-2,4-diol : Not classified for reproductive toxicity.~~

**SECTION 12 : ECOLOGICAL INFORMATION**

**12.2. Persistence and degradability**

~~Butane/Isobutane/Propane : Expected to be readily biodegradable.~~

**12.6. Endocrine disrupting properties**

~~No data available.~~

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

2-Methylpentane-2,4-diol : No information available about endocrine disrupting properties for the environment.

Butane/Isobutane/Propane : Not applicable.

Methylal : No additional information available.

Monopropylene glycol methyl ether : No information available about endocrine disrupting properties for the environment.

**12.7. Other adverse effects**

~~No data available.~~

Hydrocarbons, C11-C12, isoalkanes, < 2 % aromatics : Flowing product can lead to an accumulation of a film on the water surface that reduces the oxygen exchange and can lead to the death of organisms.

Butane/Isobutane/Propane : Not applicable.

2-Methylpentane-2,4-diol : Do not flush into surface water or sanitary sewer system. Avoid penetrating into the soil.

Methylal : Avoid release to the environment.

Monopropylene glycol methyl ether : Do not flush into surface water or sanitary sewer system. Avoid penetrating into the soil.

Alcohols, C12-14, ethoxylated : No known significant effects or critical hazards.



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**SECTION 14 : TRANSPORT INFORMATION**

~~Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 - ICAO/IATA 2021).~~

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

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**SECTION 15: Regulatory information**

**- Classification and labelling information included in section 2:**

~~EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/643 (ATP 16)~~

~~EU Regulation No. 1272/2008 amended by EU Regulation No. 2021/849 (ATP 17)~~

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

**-Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):**

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH):  
<https://echa.europa.eu/substances-restricted-under-reach>.