SAFETY DATA SHEET

WEICON

Zinc Spray

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name UFI Product code Color : Zinc Spray

: G380-R0NC-K00Q-0HRS

: 110000

: Silver.

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

| | Identified uses |
|-----------------|-----------------|
| Aerosol product | |

1.3 Details of the supplier of the safety data sheet

WEICON GmbH & Co. KG Königsberger Str. 255 48157 Münster Germany Phone: +49 251 93220 Fax: +49(0)251 / 9322 - 244 Internet: www.weicon.de e-mail address of person : msds@weicon.de responsible for this SDS

1.4 Emergency telephone number

Telephone number: EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333
(English)
TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44
1865 407333 (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229 Eye Irrit. 2, H319 STOT SE 3, H336 Aquatic Chronic 2, H411 The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word

: Danger

| Hazard statements | 1 H222 H220 Extremely flammable across Dressurized containers may burst if |
|---|---|
| Hazaro statements | H222, H229 - Extremely flammable aerosol. Pressurized container: may burst if heated. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness. |
| | H411 - Toxic to aquatic life with long lasting effects. |
| Precautionary statements | |
| General | P103 - Read label before use. P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand. |
| Prevention | P280 - Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 - Do not spray on an open flame or other ignition source. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P261 - Avoid breathing dust or mist. P264 - Wash thoroughly after handling. P251 - Do not pierce or burn, even after use. |
| Response | P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention. |
| Storage | P405 - Store locked up. P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. |
| Disposal | : P501 - Dispose of waste according to applicable legislation. |
| Hazardous ingredients | : acetone ethyl acetate n-butyl acetate butan-1-ol |
| Supplemental label elements | : Not applicable. |
| Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles | : Not applicable. |
| 2.3 Other hazards | |
| Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII | : This mixture does not contain any substances that are assessed to be a PBT or a vPvB. |
| Other hazards which do not result in classification | : Aspiration hazard - Not applicable. |

SECTION 3: Composition/information on ingredients

3.2 Mixtures

: Mixture

| Product/ingredient name | Identifiers | % | Regulation (EC) No. 1272/2008 [CLP] | Туре |
|---|--|-----------|---|---------|
| dímethyl ether | REACH #: 01-2119472128-37 EC: 204-065-8 CAS: 115-10-6 Index: 603-019-00-8 | ≥75 - ≤90 | Flam. Gas 1A, H220 Press. Gas (Comp.), H280 | [2] |
| zinc powder zinc dust (stabilised) | REACH #: 01-2119467174-37 EC: 231-175-3 CAS: 7440-66-6 Index: 030-001-01-9 | ≥10 - ≤24 | Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) | [1] [2] |
| xylene | REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7 Index: 601-022-00-9 | ≤8.3 | Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412 | [1] [2] |
| acetone | REACH #: 01-2119471330-49 EC: 200-662-2 CAS: 67-64-1 Index: 606-001-00-8 | ≤7 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 | [1] [2] |
| ethyl acetate | REACH #: 01-2119475103-46 EC: 205-500-4 CAS: 141-78-6 Index: 607-022-00-5 | ≤7 | Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066 | [1] [2] |
| n-butyl acetate | REACH #: 01-2119485493-29 EC: 204-658-1 CAS: 123-86-4 Index: 607-025-00-1 | ≤5.9 | Flam. Liq. 3, H226 STOT SE 3, H336 EUH066 | [1] [2] |
| aluminium powder (stabilised) | REACH #: 01-2119529243-45 EC: 231-072-3 CAS: 7429-90-5 Index: 013-002-00-1 | ≤5 | Flam. Sol. 1, H228 Water-react. 2, H261 | [2] |
| ethylbenzene | REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4 | ≤5 | Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 | [1] [2] |
| butan-1-ol | REACH #: 01-2119484630-38 EC: 200-751-6 CAS: 71-36-3 Index: 603-004-00-6 | ≤1.6 | Flam. Liq. 3, H226 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336 | [1] [2] |
| Quaternary ammonium compounds, coco alkylethyldimethyl, Et sulfates | REACH #: pre-registered EC: 269-662-8 CAS: 68308-64-5 | ≤0.28 | Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 | [1] |

SECTION 3: Composition/information on ingredients (M=1) See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

<u>Type</u>

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

[6] Additional disclosure due to company policy

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

| Eye contact | : | Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. |
|----------------------------|---|---|
| Inhalation | : | Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Skin contact | : | Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | : | Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Protection of first-aiders | : | No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. |

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

| Eye contact | : Adverse symptoms may include the following: pain or irritation watering redness |
|-------------|--|
| | 5 |

| SECTION 4 | 4: First aid | measures |
|-----------|--------------|----------|
|-----------|--------------|----------|

| Inhalation | : Adverse symptoms may include the following: |
|--------------|---|
| | respiratory tract irritation |
| | coughing |
| | nausea or vomiting |
| | headache |
| | drowsiness/fatigue |
| | dizziness/vertigo |
| | unconsciousness |
| Skin contact | : No specific data. |
| Ingestion | : No specific data. |

4.3 Indication of any immediate medical attention and special treatment needed

| Notes to physician | Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
|---------------------|---|
| Specific treatments | : No specific treatment. |

SECTION 5: Firefighting measures

| 5.1 Extinguishing media Suitable extinguishing media | : | Use an extinguishing agent suitable for the surrounding fire. |
|--|-----|--|
| Unsuitable extinguishing media | : | None known. |
| 5.2 Special hazards arising f | rom | the substance or mixture |
| Hazards from the substance or mixture | : | Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. |
| Hazardous combustion products | : | Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides |
| 5.3 Advice for firefighters | | |
| Special protective actions for fire-fighters | : | 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. |
| Special protective equipment for fire-fighters | : | Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

SECTION 6: Accidental release measures

| For non-emergency personnel | : | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. |
|---|---|--|
| For emergency responders | : | If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel". |
| 6.2 Environmental precautions | : | Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage. |
| 6.3 Methods and materials for containment and cleaning up | : | Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. |
| 6.4 Reference to other sections | : | See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information. |

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling

| | • |
|--|--|
| Protective measures | : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. |
| Advice on general occupational hygiene | : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. |

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

| Category | | | Notification and MAPP threshold | Safety report threshold |
|--------------------------------|--------------|------------------------|---------------------------------|-------------------------|
| P3a | | | 150 tonne | 500 tonne |
| E2 | | | 200 tonne | 500 tonne |
| Date of issue/Date of revision | : 10.08.2021 | Date of previous issue | e : 29.01.2021 | Version : 3 6/ |

SECTION 7: Handling and storage

7.3 Specific end use(s)

Recommendations Industrial sector specific : Not available.

solutions

: Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

| Product/ingredient name | Exposure limit values | | | | | | |
|------------------------------------|---|--|--|--|--|--|--|
| dimethyl ether | TRGS 900 OEL (Germany, 10/2020). | | | | | | |
| | TWA: 1900 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 15200 mg/m ³ 15 minutes. | | | | | | |
| | TWA: 1000 ppm 8 hours. | | | | | | |
| | PEAK: 8000 ppm 15 minutes. | | | | | | |
| | DFG MAC-values list (Germany, 8/2020). | | | | | | |
| | TWA: 1000 ppm 8 hours. | | | | | | |
| | PEAK: 8000 ppm, 4 times per shift, 15 minutes. | | | | | | |
| | TWA: 1900 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 15200 mg/m ³ , 4 times per shift, 15 minutes. | | | | | | |
| zinc powder zinc dust (stabilised) | DFG MAC-values list (Germany, 7/2019). | | | | | | |
| | TWA: 2 mg/m ³ 8 hours. Form: inhalable fraction | | | | | | |
| | PEAK: 4 mg/m ³ , 4 times per shift, 15 minutes. Form: inhalable fraction | | | | | | |
| | PEAK: 0.4 mg/m ³ , 4 times per shift, 15 minutes. Form: respirable | | | | | | |
| | fraction TWA: 0.1 mg/m ³ 8 hours. Form: respirable fraction | | | | | | |
| a dono | TRCS 000 OEL (Cormony 10/2020) Absorbed through skin | | | | | | |
| kylene | TRGS 900 OEL (Germany, 10/2020). Absorbed through skin. | | | | | | |
| | TWA: 220 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 440 mg/m ³ 15 minutes. | | | | | | |
| | TWA: 50 ppm 8 hours. | | | | | | |
| | PEAK: 100 ppm 15 minutes. | | | | | | |
| | DFG MAC-values list (Germany, 8/2020). Absorbed through | | | | | | |
| | skin. | | | | | | |
| | TWA: 50 ppm 8 hours. | | | | | | |
| | PEAK: 100 ppm, 4 times per shift, 15 minutes. | | | | | | |
| | TWA: 220 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 440 mg/m ³ , 4 times per shift, 15 minutes. | | | | | | |
| acetone | TRGS 900 OEL (Germany, 10/2020). | | | | | | |
| | TWA: 1200 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 2400 mg/m ³ 15 minutes. | | | | | | |
| | TWA: 500 ppm 8 hours. | | | | | | |
| | PEAK: 1000 ppm 15 minutes. | | | | | | |
| | DFG MAC-values list (Germany, 8/2020). | | | | | | |
| | TWA: 500 ppm 8 hours. | | | | | | |
| | PEAK: 1000 ppm, 4 times per shift, 15 minutes. | | | | | | |
| | TWA: 1200 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 2400 mg/m ³ , 4 times per shift, 15 minutes. | | | | | | |
| ethyl acetate | TRGS 900 OEL (Germany, 10/2020). | | | | | | |
| | TWA: 730 mg/m ³ 8 hours. | | | | | | |
| | PEAK: 1460 mg/m ³ 15 minutes. | | | | | | |
| | TWA: 200 ppm 8 hours. | | | | | | |
| | | | | | | | |

| | PEAK: 400 ppm 15 minutes. |
|------------------------------|--|
| | DFG MAC-values list (Germany, 8/2020). |
| | TWA: 200 ppm 8 hours. |
| | PEAK: 400 ppm, 4 times per shift, 15 minutes. |
| | TWA: 750 mg/m ³ 8 hours. |
| | PEAK: 1500 mg/m³, 4 times per shift, 15 minutes. |
| n-butyl acetate | DFG MAC-values list (Germany, 8/2020). |
| | TWA: 100 ppm 8 hours. |
| | PEAK: 200 ppm, 4 times per shift, 15 minutes. |
| | TWA: 480 mg/m ³ 8 hours. |
| | PEAK: 960 mg/m ³ , 4 times per shift, 15 minutes. |
| | TRGS 900 OEĽ (Germany, 10/2020). |
| | TWA: 300 mg/m ³ 8 hours. |
| | TWA: 62 ppm 8 hours. |
| | PEAK: 600 mg/m ³ 15 minutes. |
| | PEAK: 124 ppm 15 minutes. |
| luminium powder (stabilised) | TRGS 900 OEL (Germany, 3/2020). |
| | TWA: 1.25 mg/m ³ 8 hours. Form: alveolar fraction |
| | PEAK: 2.5 mg/m ³ 15 minutes. Form: alveolar fraction |
| | PEAK: 20 mg/m ³ 15 minutes. Form: inhalable fraction |
| | TWA: 10 mg/m ³ 8 hours. Form: inhalable fraction |
| | DFG MAC-values list (Germany, 7/2019). |
| | TWA: 4 mg/m ³ 8 hours. Form: inhalable dust TWA: 1.5 mg/m ³ 8 hours. Form: respirable dust |
| thylbenzene | TRGS 900 OEL (Germany, 10/2020). Absorbed through skin. |
| | TWA: 88 mg/m ³ 8 hours. |
| | PEAK: 176 mg/m ³ 15 minutes. |
| | TWA: 20 ppm 8 hours. |
| | PEAK: 40 ppm 15 minutes. |
| | DFG MAC-values list (Germany, 8/2020). Absorbed through |
| | skin. |
| | PEAK: 40 ppm, 4 times per shift, 15 minutes. |
| | PEAK: 176 mg/m ³ , 4 times per shift, 15 minutes. |
| | TWA: 88 mg/m ³ 8 hours. TWA: 20 ppm 8 hours. |
| | |
| utan-1-ol | TRGS 900 OEL (Germany, 10/2020). |
| | TWA: 310 mg/m ³ 8 hours. |
| | PEAK: 310 mg/m ³ 15 minutes. |
| | TWA: 100 ppm 8 hours. PEAK: 100 ppm 15 minutes. |
| | DFG MAC-values list (Germany, 8/2020). |
| | TWA: 100 ppm 8 hours. |
| | PEAK: 100 ppm, 4 times per shift, 15 minutes. |
| | TWA: 310 mg/m ³ 8 hours. |
| | PEAK: 310 mg/m³, 4 times per shift, 15 minutes. |
| ecommended monitoring : | If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectivenes |
| rocedures | of the ventilation or other control measures and/or the necessity to use respiratory |
| | protective equipment. Reference should be made to monitoring standards, such a |
| | the following: European Standard EN 689 (Workplace atmospheres - Guidance fo |
| | the assessment of exposure by inhalation to chemical agents for comparison with |
| | limit values and measurement strategy) European Standard EN 14042 (Workplac |
| | atmospheres - Guide for the application and use of procedures for the assessmer |
| | of exposure to chemical and biological agents) European Standard EN 482 |
| | (Workplace atmospheres - General requirements for the performance of procedu |
| | for the measurement of chemical agents) Reference to national guidance |

SECTION 8: Exposure controls/personal protection

documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

| Product/ingredient name | Туре | Exposure | Value | Population | Effects |
|------------------------------------|------|--------------------------|----------------------------|-----------------------|----------|
| dimethyl ether | DNEL | Long term Inhalation | 471 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 1894 mg/ m³ | Workers | Systemic |
| zinc powder zinc dust (stabilised) | DNEL | Long term Oral | 0.83 mg/ kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 2.5 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 5 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 83 mg/kg bw/day | Workers | Systemic |
| xylene | DNEL | Long term Oral | 1.6 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 14.8 mg/m ³ | General population | Systemic |
| | DNEL | Long term Inhalation | 77 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 108 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 289 mg/m³ | Workers | Local |
| | DNEL | Short term Inhalation | 289 mg/m³ | Workers | Systemic |
| acetone | DNEL | Long term Oral | 62 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 62 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 186 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 200 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 1210 mg/ m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 2420 mg/ m ³ | Workers | Local |

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| CTION 8: Exposure cont | - | - | - | | |
|------------------------|------|--------------------------|---------------------|-----------------------|----------|
| thyl acetate | DNEL | Long term Oral | 4.5 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 37 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 63 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 367 mg/m³ | General population | Local |
| | DNEL | Long term Inhalation | 367 mg/m³ | General population | Systemic |
| | DNEL | Short term Inhalation | 734 mg/m³ | General population | Local |
| | DNEL | Short term Inhalation | 734 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 734 mg/m³ | Workers | Local |
| | DNEL | Long term Inhalation | 734 mg/m³ | Workers | Systemic |
| | DNEL | Short term Inhalation | 1468 mg/ m³ | Workers | Local |
| | DNEL | Short term Inhalation | 1468 mg/ m³ | Workers | Systemic |
| n-butyl acetate | DNEL | Long term Oral | 3.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 3.4 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Dermal | 7 mg/kg bw/day | Workers | Systemic |
| | DNEL | Long term Inhalation | 12 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 48 mg/m³ | Workers | Systemic |
| | DNEL | Long term Inhalation | 102.34 mg/ m³ | General population | Local |
| | DNEL | Long term Inhalation | 480 mg/m³ | Workers | Local |
| | DNEL | Short term Inhalation | 859.7 mg/ m³ | General population | Local |
| | DNEL | Short term Inhalation | 859.7 mg/ m³ | General population | Systemic |
| | DNEL | Short term Inhalation | 960 mg/m³ | Workers | Local |
| | DNEL | Short term Inhalation | 960 mg/m³ | Workers | Systemic |

| ECTION 8: Exposi | ure controls/p | ersonal prote | ction | | |
|------------------|----------------|--------------------------|------------------------|-----------------------|----------|
| ethylbenzene | | Long term Oral | 1.6 mg/kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 15 mg/m³ | General population | Systemic |
| | DNEL | Long term Inhalation | 77 mg/m³ | Workers | Systemic |
| | DNEL | Long term Dermal | 180 mg/kg bw/day | Workers | Systemic |
| | DNEL | Short term Inhalation | 293 mg/m³ | Workers | Local |
| | DMEL | Long term Inhalation | 442 mg/m ³ | Workers | Local |
| | DMEL | Short term Inhalation | 884 mg/m³ | Workers | Systemic |
| butan-1-ol | DNEL | Long term Oral | 3.125 mg/ kg bw/day | General population | Systemic |
| | DNEL | Long term Inhalation | 55 mg/m³ | General population | Local |
| | DNEL | Long term Inhalation | 310 mg/m³ | Workers | Local |

PNECs

No PNECs available.

| : | Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment. |
|-----|--|
| res | |
| : | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. |
| : | Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles. |
| | |
| : | Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): nitrile rubber 4 - 8 hours (breakthrough time): Viton®/butyl rubber |
| | r <u>es</u> : |

SECTION 8: Exposure controls/personal protection

| Body protection | : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods. |
|------------------------------------|--|
| Other skin protection | : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |
| Respiratory protection | : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter |
| Environmental exposure controls | : 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

| <u>Appearance</u> | | |
|---|---|-----------------------------|
| Physical state | : | Aerosol. |
| Color | : | Silver. |
| Odor | : | Solvent. Sweetish. |
| Odor threshold | : | Not available. |
| Melting point/freezing point | : | -24°C |
| Initial boiling point and boiling range | : | Not available. |
| Flammability (solid, gas) | : | Not available. |
| Upper/lower flammability or explosive limits | : | Not available. |
| Flash point | : | Closed cup: Not applicable. |
| Auto-ignition temperature | : | Not applicable. |
| Decomposition temperature | : | Not available. |
| рН | : | No results available. |
| Viscosity | : | Not available. |
| Solubility(ies) | : | Not available. |
| Solubility in water | : | Not available. |
| Partition coefficient: n-octanol/ water | : | Not applicable. |
| Vapor pressure | | Vere |

| : | | Vapor | Vapor Pressure at 20°C Va | | | r pressu | re at 50°C | 50°C |
|------|-----------------------|---------|---------------------------|-------------------|----------|----------|------------|------|
| | Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method | |
| | dimethyl ether | 3850 | 513.3 | | | | | |
| | acetone | 180.01 | 24 | | | | | |
| | ethyl acetate | 81.59 | 10.9 | | | | | |
| | n-butyl acetate | 11.25 | 1.5 | DIN EN 13016-2 | | | | |
| | ethylbenzene | 9.3 | 1.2 | | | | | |
| | butan-1-ol | <7.5 | <1 | DIN EN 13016-2 | | | | |
| : 10 | .08.2021 Date of prev | Version | :3 12 | 2/23 | | | | |

SECTION 9: Physical and chemical properties

| | | | • | | | | | | | |
|--------------------------|--------------------------|-----------|-----|------|--|--|--|--|--|--|
| | xylene | | 6.7 | 0.89 | | | | | | |
| Evaporation rate | : Not av | ailable. | | | | | | | | |
| Relative density | : Not available. | | | | | | | | | |
| Density | : 0.86 g/cm ³ | | | | | | | | | |
| Vapor density | : Not av | ailable. | | | | | | | | |
| Explosive properties | : Not av | ailable. | | | | | | | | |
| Oxidizing properties | : Not available. | | | | | | | | | |
| Particle characteristics | | | | | | | | | | |
| Median particle size | : Not ap | plicable. | | | | | | | | |
| SADT | : Not ap | plicable. | | | | | | | | |
| SAPT | : Not ap | plicable. | | | | | | | | |
| Heat of combustion | : 33.32 | kJ/g | | | | | | | | |
| Aerosol product | | | | | | | | | | |
| Type of aerosol | : Spray | | | | | | | | | |
| | | | | | | | | | | |

SECTION 10: Stability and reactivity

| 10.1 Reactivity | : No specific test data related to reactivity available for this product or its ingredients. | |
|--|--|--|
| 10.2 Chemical stability | : The product is stable. | |
| 10.3 Possibility of hazardous reactions | : Under normal conditions of storage and use, hazardous reactions will not occur. | |
| 10.4 Conditions to avoid | : Avoid all possible sources of ignition (spark or flame). | |
| 10.5 Incompatible materials | : No specific data. | |
| 10.6 Hazardous decomposition products | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. | |

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

| Product/ingredient name | Result | Species | Dose | Exposure |
|-------------------------|-----------------------|---------|--------------|----------|
| dimethyl ether | LC50 Inhalation Gas. | Rat | 164000 ppm | 4 hours |
| | LC50 Inhalation Vapor | Rat | 309 g/m³ | 4 hours |
| xylene | LD50 Oral | Rat | 4300 mg/kg | - |
| acetone | LD50 Oral | Rat | 5800 mg/kg | - |
| ethyl acetate | LD50 Oral | Rat | 5620 mg/kg | - |
| n-butyl acetate | LD50 Dermal | Rabbit | >17600 mg/kg | - |
| | LD50 Oral | Rat | 10768 mg/kg | - |
| ethylbenzene | LD50 Dermal | Rabbit | >5000 mg/kg | - |
| | LD50 Oral | Rat | 3500 mg/kg | - |
| butan-1-ol | LC50 Inhalation Vapor | Rat | 24000 mg/m³ | 4 hours |

| SECTION 11: Toxicological information | | | | |
|---------------------------------------|------------------|--------|------------|---|
| | LD50 Dermal | Rabbit | 3400 mg/kg | - |
| | LD50 Oral | Rat | 790 mg/kg | - |
| Conclusion/Summary | : Not available. | | | |

Conclusion/Summary

Acute toxicity estimates

| Route | ATE value | |
|---------------------|---------------|--|
| Oral | 57235.5 mg/kg | |
| Dermal | 15939 mg/kg | |
| Inhalation (vapors) | 113.85 mg/l | |

Irritation/Corrosion

| Product/ingredient name | Result | Species | Score | Exposure | Observation |
|---------------------------------------|--------------------------|---------|-------|----------------------|-------------|
| zinc powder zinc dust (stabilised) | Skin - Mild irritant | Human | - | 72 hours 300 ug l | - |
| xylene | Eyes - Mild irritant | Rabbit | - | 87 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 24 hours 5 mg | - |
| | Skin - Mild irritant | Rat | - | 8 hours 60 uL | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 100 % | - |
| acetone | Eyes - Mild irritant | Human | - | 186300 ppm | - |
| | Eyes - Mild irritant | Rabbit | - | 10 uL | - |
| | Eyes - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 20 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 395 mg | - |
| n-butyl acetate | Eyes - Moderate irritant | Rabbit | - | 100 mg | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 500 mg | - |
| ethylbenzene | Eyes - Severe irritant | Rabbit | - | 500 mg | - |
| | Skin - Mild irritant | Rabbit | - | 24 hours 15 mg | - |
| butan-1-ol | Eyes - Severe irritant | Rabbit | - | 24 hours 2 mg | - |
| | Eyes - Severe irritant | Rabbit | - | 0.005 MI | - |
| | Skin - Moderate irritant | Rabbit | - | 24 hours 20 mg | - |
| Conclusion/Summary | : Not available. | | | | |

SECTION 11: Toxicological information

| Conclusion/Summary | : Not available. |
|------------------------------|-----------------------------|
| <u>Mutagenicity</u> | |
| Conclusion/Summary | : Not available. |
| Carcinogenicity | |
| Conclusion/Summary | : Not available. |
| Reproductive toxicity | |
| Conclusion/Summary | : Not available. |
| <u>Teratogenicity</u> | |
| Conclusion/Summary | : Not available. |
| Specific target organ toxici | <u>ty (single exposure)</u> |
| | |

| Product/ingredient name | Category | Route of exposure | Target organs | |
|-------------------------|------------|-------------------|------------------------------|--|
| xylene | Category 3 | - | Respiratory tract irritation | |
| acetone | Category 3 | - | Narcotic effects | |
| ethyl acetate | Category 3 | - | Narcotic effects | |
| n-butyl acetate | Category 3 | - | Narcotic effects | |
| butan-1-ol | Category 3 | - | Respiratory tract irritation | |
| | Category 3 | | Narcotic effects | |

Specific target organ toxicity (repeated exposure)

| Product/ingredient name | Category | Route of exposure | Target organs |
|-------------------------|------------|-------------------|----------------|
| ethylbenzene | Category 2 | - | hearing organs |

Aspiration hazard

| Product/ingredient name | Result |
|-------------------------|--------------------------------|
| xylene | ASPIRATION HAZARD - Category 1 |
| ethylbenzene | ASPIRATION HAZARD - Category 1 |

| Information on the likely | : Not available. |
|-------------------------------|------------------|
| routes of exposure | |
| Potential acute health effect | ts |

| Folential acule health enects | | |
|-------------------------------|---|---|
| Eye contact | : | Causes serious eye irritation. |
| Inhalation | : | Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. |
| Skin contact | : | No known significant effects or critical hazards. |
| Ingestion | : | Can cause central nervous system (CNS) depression. |
| | | |

Symptoms related to the physical, chemical and toxicological characteristics

| Eye contact | : Adverse symptoms may include the following: pain or irritation watering redness |
|-------------|--|
|-------------|--|

SECTION 11: Toxicological information

| Inhalation | : Adverse symptoms may include the following: respiratory tract irritation coughing nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness |
|--------------|---|
| Skin contact | : No specific data. |
| Ingestion | : No specific data. |

Delayed and immediate effects and also chronic effects from short and long term exposure

| <u>Short term exposure</u> | |
|-------------------------------|---|
| Potential immediate effects | : Not available. |
| Potential delayed effects | : Not available. |
| <u>Long term exposure</u> | |
| Potential immediate | : Not available. |
| effects | |
| Potential delayed effects | : Not available. |
| Potential chronic health effe | <u>cts</u> |
| Not available. | |
| Conclusion/Summary | : Not available. |
| General | : No known significant effects or critical hazards. |
| Carcinogenicity | : No known significant effects or critical hazards. |
| Mutagenicity | : No known significant effects or critical hazards. |
| Teratogenicity | : No known significant effects or critical hazards. |
| Developmental effects | : No known significant effects or critical hazards. |
| Fertility effects | : No known significant effects or critical hazards. |
| | |

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

| Product/ingredient name | Result | Species | Exposure |
|---------------------------------------|-------------------------------------|--|----------|
| zinc powder zinc dust (stabilised) | Acute EC50 0.005 mg/l | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 10000 µg/l Fresh water | Aquatic plants - Lemna minor | 4 days |
| | Acute IC50 65 µg/l Marine water | Algae - Nitzschia closterium - Exponential growth phase | 4 days |
| | Acute LC50 65 μg/l Fresh water | Crustaceans - Ceriodaphnia dubia - Neonate | 48 hours |
| | Acute LC50 68 µg/l Fresh water | Daphnia - Daphnia magna | 48 hours |
| | Acute LC50 12.21 µg/l Marine water | Fish - Periophthalmus waltoni - Adult | 96 hours |
| | Chronic EC10 27.3 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata - Exponential growth phase | 72 hours |
| te of issue/Date of revision | : 10.08.2021 Date of previous issue | : 29.01.2021 Version | :3 16 |

| xylene acetone | Chronic EC10 59.2 µg/l Fresh water Chronic NOEC 9 mg/l Fresh water Chronic NOEC 178 µg/l Marine water Chronic NOEC 2.6 µg/l Fresh water Acute EC50 90 mg/l Fresh water Acute EC50 90 mg/l Fresh water Acute EC50 13400 µg/l Fresh water Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Daphnia - Daphnia magna Aquatic plants - Ceratophyllum demersum Crustaceans - Palaemon elegans Fish - Cyprinus carpio Crustaceans - Cypris subglobosa Fish - Pimephales promelas Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 21 days 3 days 21 days 4 weeks 4 weeks 48 hours 96 hours 96 hours 48 hours 48 hours |
|-------------------|---|---|--|
| | Chronic NOEC 178 µg/l Marine water Chronic NOEC 2.6 µg/l Fresh water Acute EC50 90 mg/l Fresh water Acute LC50 13400 µg/l Fresh water Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | demersum Crustaceans - Palaemon elegans Fish - Cyprinus carpio Crustaceans - Cypris subglobosa Fish - Pimephales promelas Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 21 days 4 weeks 48 hours 96 hours 96 hours 48 hours |
| | Chronic NOEC 2.6 µg/l Fresh water Acute EC50 90 mg/l Fresh water Acute LC50 13400 µg/l Fresh water Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | elegans Fish - Cyprinus carpio Crustaceans - Cypris subglobosa Fish - Pimephales promelas Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 4 weeks 48 hours 96 hours 96 hours 48 hours |
| | Acute EC50 90 mg/l Fresh water Acute LC50 13400 µg/l Fresh water Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Crustaceans - Cypris subglobosa Fish - Pimephales promelas Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 48 hours 96 hours 96 hours 48 hours |
| | Acute LC50 13400 µg/l Fresh water Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | subglobosa Fish - Pimephales promelas Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 96 hours 96 hours 48 hours |
| acetone | Acute EC50 20.565 mg/l Marine water Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Algae - Ulva pertusa Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 96 hours 48 hours |
| acetone | Acute LC50 4.42589 ml/L Marine water Acute LC50 10000 µg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Crustaceans - Acartia tonsa - Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | 48 hours |
| | Acute LC50 10000 μg/l Fresh water Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Copepodid Daphnia - Daphnia magna Fish - Poecilia reticulata | |
| | Acute LC50 5600 ppm Fresh water Chronic NOEC 4.95 mg/l Marine water | Fish - Poecilia reticulata | 48 hours |
| | Chronic NOEC 4.95 mg/l Marine water | | |
| | | | 96 hours |
| | Chronic NOEC 0.016 ml/L Fresh water | Algae - Ulva pertusa | 96 hours |
| | | Crustaceans - Daphniidae | 21 days |
| | Chronic NOEC 0.1 ml/L Fresh water | Daphnia - Daphnia magna - Neonate | 21 days |
| | Chronic NOEC 5 µg/l Marine water | Fish - Gasterosteus aculeatus - Larvae | 42 days |
| ethyl acetate | Acute EC50 2500000 μg/l Fresh water | Algae - Selenastrum sp. | 96 hours |
| | Acute LC50 750000 µg/l Fresh water | Crustaceans - Gammarus pulex | 48 hours |
| | Acute LC50 154000 µg/l Fresh water | Daphnia - Daphnia cucullata | 48 hours |
| | Acute LC50 212500 µg/l Fresh water | Fish - Heteropneustes fossilis | 96 hours |
| | Chronic NOEC 2400 µg/l Fresh water | Daphnia - Daphnia magna | 21 days |
| | Chronic NOEC 75.6 mg/l Fresh water | Fish - Pimephales promelas - Embryo | 32 days |
| n-butyl acetate | Acute LC50 32 mg/l Marine water | Crustaceans - Artemia salina | 48 hours |
| | Acute LC50 18000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |
| ethylbenzene | Acute EC50 4600 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 3600 µg/l Fresh water | Algae - Pseudokirchneriella subcapitata | 96 hours |
| | Acute EC50 6.53 mg/l Marine water | Crustaceans - Artemia sp Nauplii | 48 hours |
| | Acute EC50 2.93 mg/l Fresh water | Daphnia - Daphnia magna - Neonate | 48 hours |
| | Acute LC50 4200 µg/l Fresh water | Fish - Oncorhynchus mykiss | 96 hours |
| butan-1-ol | Acute EC50 1983 mg/l Fresh water | Daphnia - Daphnia magna | 48 hours |

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2015/830 - Germany

Zinc Spray

| SECTION 12: Eco | ological information | | |
|-----------------|-------------------------------------|----------------------------|----------|
| | Acute LC50 1730000 µg/l Fresh water | Fish - Pimephales promelas | 96 hours |

Conclusion/Summary

: Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

12.3 Bioaccumulative potential

| Product/ingredient name | LogPow | BCF | Potential |
|-------------------------|--------|-------------|-----------|
| dimethyl ether | 0.07 | - | low |
| xylene | 3.12 | 8.1 to 25.9 | low |
| acetone | -0.23 | - | low |
| ethyl acetate | 0.68 | 30 | low |
| n-butyl acetate | 2.3 | - | low |
| ethylbenzene | 3.6 | - | low |
| butan-1-ol | 1 | - | low |

| 12.4 Mobility in soil | |
|--|------------------|
| Soil/water partition coefficient (Koc) | : Not available. |
| Mobility | : Not available. |

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Other adverse effects : No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

| <u>Product</u> | |
|---------------------|--|
| Methods of disposal | : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non- recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. |
| Hazardaya waata | . The elegation of the product movement the criteria for a hearthque wests |

Hazardous waste

: The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)

| Waste code | Waste designation |
|---------------------|--|
| 16 05 04* | gases in pressure containers (including halons) containing hazardous substances |
| Packaging | |
| Methods of disposal | : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. |

Date of issue/Date of revision

| 2015/830 - Germany Zinc Spray | 1 | | | |
|--|----------------------------|--|--|--|
| SECTION 13: | Disno | sal consideratio | ons | |
| Type of packa | - | | European waste catalogu | e (EWC) |
| 15 01 04 | 5 01 04 metallic packaging | | | |
| Special precaution | ns | | | of in a safe way. Empty containers not puncture or incinerate container |
| SECTION 14: | Trans | port informatior | ו ו | |
| | | ADR/RID | IMDG | ΙΑΤΑ |
| 14.1 UN number | <mark>₩</mark> N195 | 50 | UN1950 | UN1950 |
| 14.2 UN proper shipping name | A ERO: | SOLS | AEROSOLS | Aerosols, flammable |
| 14.3 Transport hazard class(es) | 2 | | 2.1 | 2.1 |
| 14.4 Packing group | - | | - | - |
| 14.5 Environmental hazards | Yes. | | Yes. Zinc powder - zinc dust (stabilized) | Yes. The environmentally hazardous substance mark is not required. |
| | Zinc po (stabili: | owder - zinc dust zed) | | |
| Additional informa ADR/RID | i <u>tion</u> | sizes of ≤5 L or ≤{ <u>Limited quantity</u> | 5 kg. 1 L <u>ns</u> 190, 327, 625, 344 | is not required when transported in |
| IMDG | | Emergency sche | | ransported in sizes of ≤5 L or ≤5 kg 959 |
| ΙΑΤΑ | | : The environmenta transportation reg <u>Quantity limitatio</u> 203. Cargo Aircra Passenger Aircra | ally hazardous substance mark ulations. <u>on</u> Passenger and Cargo Aircra | may appear if required by other aft: 75 kg. Packaging instructions: tructions: 203. Limited Quantities - |
| 14.6 Special precau user | utions fo | | e. Ensure that persons transpor | sport in closed containers that are rting the product know what to do ir |
| 14.7 Transport in b according to IMO instruments | ulk | : Not available. | | |

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions : Not applicable. on the manufacture. placing on the market and use of certain dangerous substances, mixtures and articles

Restrictions on Manufacture, Marketing and Use

| Product name | CAS # | % | Restriction |
|--------------|-----------|--------|-------------|
| xylene | 1330-20-7 | 5 - 10 | 3 |
| ethylbenzene | 100-41-4 | 1 - 5 | 3 |

Other EU regulations

| Industrial emissions (integrated pollution prevention and control) - Air | : | Listed |
|---|---|--------|
| Industrial emissions (integrated pollution prevention and control) - Water | : | Listed |

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers





Extremely flammable

: 76,8 %

VOC content VOC (g/L)

: 660 g/L

5

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

SECTION 15: Regulatory information

Category

P3a

E2

National regulations

| Product/ingredient name | List name | Name on list | Classification | Notes |
|---------------------------------------|---------------------|--|----------------|-------|
| dimethyl ether | | Dimethyl ether; Methyl ether | Listed | - |
| zinc powder zinc dust (stabilised) | | Zinc and its inorganic compounds (inhalable fraction) / (respirable fraction) | Listed | - |
| xylene | DFG MAC-values list | Xylene (all isomers) | Listed | - |
| acetone | DFG MAC-values list | Acetone | RE2 | - |
| ethyl acetate | DFG MAC-values list | Ethyl acetate | Listed | - |
| n-butyl acetate | DFG MAC-values list | n-Butyl acetate | Listed | - |
| aluminium powder (stabilised) | | Aluminium, Aluminium oxide and Aluminium hydroxide, containing dusts (inhalable fraction) / (respirable fraction) | Listed | - |
| ethylbenzene | | Ethylbenzene | K3 | - |
| butan-1-ol | | n-Butyl alcohol; n- Butanol | Listed | - |

Storage class (TRGS 510) : 2B

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

| Category | Reference number |
|----------|------------------|
| P3a | 1.2.3.1 |
| E2 | 1.3.2 |
| | |

| Hazard class for water | : 2 |
|--------------------------|--|
| Technical instruction on | : TA-Luft Number 5.2.5: 63-100% |
| air quality control | TA-Luft Class III - Number 5.2.2: 10-20% |
| | TA-Luft Class I - Number 5.2.5: 1-5% |

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

| Inventory list | |
|----------------|--|
| Australia | : All components are listed or exempted. |
| Canada | : All components are listed or exempted. |
| China | : All components are listed or exempted. |

SECTION 15: Regulatory information

| Europe | : All components are listed or exempted. |
|-------------------|--|
| Japan | : All components are listed or exempted. |
| New Zealand | : All components are listed or exempted. |
| Philippines | : All components are listed or exempted. |
| Republic of Korea | : All components are listed or exempted. |
| Taiwan | : All components are listed or exempted. |
| Turkey | : All components are listed or exempted. |
| United States | : All components are active or exempted. |
| Viet Nam | : All components are listed or exempted. |
| | |

| 15.2 | Chemical | Safety |
|------|----------|--------|
| - | | |

Assessment

: Complete.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

| Abbreviations and | : ATE = Acute Toxicity Estimate |
|-------------------|---|
| acronyms | CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. |
| | 1272/2008] |
| | DMEL = Derived Minimal Effect Level |
| | DNEL = Derived No Effect Level |
| | EUH statement = CLP-specific Hazard statement |
| | N/A = Not available |
| | PBT = Persistent, Bioaccumulative and Toxic |
| | PNEC = Predicted No Effect Concentration |
| | RRN = REACH Registration Number |
| | SGG = Segregation Group |
| | vPvB = Very Persistent and Very Bioaccumulative |
| | |

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

| Classification | Justification |
|-------------------------|-----------------------|
| Aerosol 1, H222, H229 | On basis of test data |
| Eye Irrit. 2, H319 | Calculation method |
| STOT SE 3, H336 | Calculation method |
| Aquatic Chronic 2, H411 | Calculation method |

Full text of abbreviated H statements

| H373 H400 H410 | May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. |
|----------------------|---|
| H336 | May cause drowsiness or dizziness. |
| H335 | May cause respiratory irritation. |
| H332 | Causes serious eye irritation. Harmful if inhaled. |
| H318 H319 | Causes serious eye damage. |
| H315 | Causes skin irritation. |
| H314 | Causes severe skin burns and eye damage. |
| H312 | Harmful in contact with skin. |
| H304 | May be fatal if swallowed and enters airways. |
| H302 | Harmful if swallowed. |
| H280 | Contains gas under pressure; may explode if heated. |
| H261 | In contact with water releases flammable gas. |
| H228 | Flammable solid. |
| H226 | Flammable liquid and vapor. |
| H225 | Highly flammable liquid and vapor. |
| H222, H229 | Extremely flammable aerosol. Pressurized container: may burst if heated. |
| H220 | Extremely flammable gas. |

| SECTION 16: Other | ^r information | |
|---------------------------------|--------------------------|--|
| H412 | | Harmful to aquatic life with long lasting effects. |
| EUH066 | | Repeated exposure may cause skin dryness or cracking. |
| Full text of classifications | [CLP/GHS] | |
| Acute Tox. 4 | | ACUTE TOXICITY - Category 4 |
| Aerosol 1 | | AEROSOLS - Category 1 |
| Aquatic Acute 1 | | AQUATIC HAZARD (ACUTE) - Category 1 |
| Aquatic Chronic 1 | | AQUATIC HAZARD (LONG-TERM) - Category 1 |
| Aquatic Chronic 2 | | AQUATIC HAZARD (LONG-TERM) - Category 2 |
| Aquatic Chronic 3 | | AQUATIC HAZARD (LONG-TERM) - Category 3 |
| Asp. Tox. 1 | | ASPIRATION HAZARD - Category 1 |
| Eye Dam. 1 | | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 |
| Eye Irrit. 2 | | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2 |
| Flam. Gas 1A | | FLAMMABLE GASES - Category 1A |
| Flam. Liq. 2 | | FLAMMABLE LIQUIDS - Category 2 |
| Flam. Liq. 3 | | FLAMMABLE LIQUIDS - Category 3 |
| Flam. Sol. 1 | | FLAMMABLE SOLIDS - Category 1 |
| Press. Gas (Comp.) | | GASES UNDER PRESSURE - Compressed gas |
| Skin Corr. 1B | | SKIN CORROSION/IRRITATION - Category 1B |
| Skin Irrit. 2 STOT RE 2 | | SKIN CORROSION/IRRITATION - Category 2 |
| STOT RE 2 | | SPECIFIC TARGET ORGAN TOXICITY (REPEATED |
| STOT SE 3 | | EXPOSURE) - Category 2 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - |
| STOT 3E 3 | | Category 3 |
| Water-react. 2 | | SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH |
| | | WATER, EMIT FLAMMABLE GASES - Category 2 |
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| Notico to reador | | |

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