

**Safety Data Sheet**  
according to Regulation (EC) No. 1907/2006 (REACH)  
according to Regulation (EU) 2020/878



|              |            |                          |             |
|--------------|------------|--------------------------|-------------|
| Article No.: | 40-81      | Zinkausbesserungsfarbe   |             |
| Print date   | 09.02.2026 | Revision date 28.08.2025 | EN          |
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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

|                                      |                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------|
| Article No. (manufacturer/supplier): | 40-81                                                                               |
| Trade name/designation               | Zinkausbesserungsfarbe<br>silber<br>metallisch glänzend<br>UFI: TOUH-OJKX-SG04-6FKR |

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

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

**Supplier (manufacturer/importer/only representative/downstream user/distributor)**

|                                                                                      |                                                           |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------|
| P.A. Jansen GmbH u. Co., KG<br>Hochstadenstraße 22<br>D-53474 Bad Neuenahr-Ahrweiler | Telephone: +49 2641 3897-0<br><br>Homepage: www.jansen.de |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------|

**Department responsible for information:**

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| laboratory<br>E-mail (competent person) | sicherheitsdatenblatt@jansen.de |
|-----------------------------------------|---------------------------------|

**1.4. Emergency telephone number**

|                                                                   |                  |
|-------------------------------------------------------------------|------------------|
| Emergency telephone number<br>Only available during office hours. | +49 2641 3897-51 |
|-------------------------------------------------------------------|------------------|

**SECTION 2: Hazards identification**

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

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

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

|                          |                                      |                                                       |
|--------------------------|--------------------------------------|-------------------------------------------------------|
| Flam. Liq. 3 / H226      | Flammable liquids                    | Flammable liquid and vapour.                          |
| Skin Sens. 1 / H317      | Respiratory or skin sensitisation    | May cause an allergic skin reaction.                  |
| STOT SE 3 / H335         | STOT-single exposure                 | May cause respiratory irritation.                     |
| STOT SE 3 / H336         | STOT-single exposure                 | May cause drowsiness or dizziness.                    |
| Aquatic Acute 1 / H400   | Hazardous to the aquatic environment | Very toxic to aquatic organisms.                      |
| Aquatic Chronic 1 / H410 | Hazardous to the aquatic environment | Very toxic to aquatic life with long lasting effects. |

**2.2. Label elements**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**Hazard pictograms**



**Warning**

**Hazard statements**

|      |                                                       |
|------|-------------------------------------------------------|
| H226 | Flammable liquid and vapour.                          |
| H317 | May cause an allergic skin reaction.                  |
| H335 | May cause respiratory irritation.                     |
| H336 | May cause drowsiness or dizziness.                    |
| H410 | Very toxic to aquatic life with long lasting effects. |

**Precautionary statements**

|               |                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------|
| P101          | If medical advice is needed, have product container or label at hand.                               |
| P102          | Keep out of reach of children.                                                                      |
| P210          | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.      |
| P271          | Use only outdoors or in a well-ventilated area.                                                     |
| P280          | Wear protective gloves and eye protection/face protection.                                          |
| P370 + P378.6 | In case of fire: Use carbon dioxide, extinguishing powder or alcohol-resistant foam to extinguish.  |
| P403 + P233   | Store in a well-ventilated place. Keep container tightly closed.                                    |
| P501          | Dispose of contents/container in accordance with local/regional/national/international regulations. |

**Hazard components for labelling**

maleic anhydride  
Hydrocarbons, C9, aromatics

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Fatty acids, C14-18 and C16-18-unsatd., maleated

**Supplemental hazard information**

EUH066 Repeated exposure may cause skin dryness or cracking.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

**Description**

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

| EC No.<br>CAS No.<br>Index No.         | REACH No.<br>Designation<br>classification: // Remark                                                                                                                                                                                                                                               | weight-%   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| 231-175-3<br>7440-66-6<br>030-001-01-9 | 01-2119467174-37<br>Zinc powder - zinc dust (stabilised)<br>Aquatic Acute 1 H400 (M = 1) / Aquatic Chronic 1 H410 (M = 1)                                                                                                                                                                           | 25 - 35    |
| 918-668-5                              | 01-2119455851-35<br>Hydrocarbons, C9, aromatics<br>Flam. Liq. 3 H226 / STOT SE 3 H335 / Aquatic Chronic 2 H411 / Asp.<br>Tox. 1 H304 / STOT SE 3 H336 / EUH066                                                                                                                                      | 20 - 25    |
| 231-072-3<br>7429-90-5<br>013-002-00-1 | 01-2119529243-45<br>aluminium powder (stabilised)<br>Flam. Sol. 1 H228                                                                                                                                                                                                                              | 8 - 10     |
| 215-535-7<br>1330-20-7<br>601-022-00-9 | 01-2119488216-32<br>Xylene<br>Acute Tox. 4 H312 / Acute Tox. 4 H332 / Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / STOT SE 3 H335 / STOT RE 2 H373 / Asp. Tox. 1 H304 / Flam. Liq. 3 H226<br>Acute toxicity estimate (ATE): ATE (dermal): 4200 mg/kg bw                                                 | 8 - 10     |
| 918-481-9                              | 01-2119457273-39<br>Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics<br>Asp. Tox. 1 H304 / EUH066                                                                                                                                                                             | 7 - 8      |
| 939-607-9<br>68308-64-5                | Quaternary ammonium compounds, cocoalkylethyldimethyl-, ethylsulfates<br>Acute Tox. 4 H302 / Acute Tox. 3 H311 / Skin Corr. 1C H314 / Eye Dam. 1 H318 / Aquatic Acute 1 H400 / Aquatic Chronic 1 H410                                                                                               | 0,5 - 1    |
| 288-306-2<br>85711-46-2                | Fatty acids, C14-18 and C16-18-unsatd., maleated<br>Skin Irrit. 2 H315 / Eye Irrit. 2 H319 / Skin Sens. 1B H317                                                                                                                                                                                     | 0,3 - 0,5  |
| 203-571-6<br>108-31-6<br>607-096-00-9  | 01-2119472428-31<br>maleic anhydride<br>Acute Tox. 4 H302 / STOT RE 1 H372 / Skin Corr. 1B H314 / Eye Dam. 1 H318 / Resp. Sens. 1 H334 / Skin Sens. 1A H317 / EUH071<br>Specific concentration limit (SCL): Skin Sens. 1A H317 >= 0,001<br>Acute toxicity estimate (ATE): ATE (oral): 1090 mg/kg bw | 0,05 - 0,1 |

**Additional information**

Full text of classification: see section 16

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness give nothing by mouth, place in recovery position and seek medical advice.

**In case of inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

**Following skin contact**

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Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

**After eye contact**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice immediately.

**Following ingestion**

If swallowed, rinse mouth with water (only if the person is conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

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

In all cases of doubt, or when symptoms persist, seek medical advice.

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

First Aid, decontamination, treatment of symptoms.

**SECTION 5: Firefighting measures**

**5.1. Extinguishing media**

**Suitable extinguishing media**

alcohol resistant foam, carbon dioxide, Powder, spray mist, (water)

**Unsuitable extinguishing media**

strong water jet

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

Dense black smoke occurs during fire. Inhaling hazardous decomposing products can cause serious health damage.

**5.3. Advice for firefighters**

Provide a conveniently located respiratory protective device. Do not allow water used to extinguish fire to enter drains, ground or waterways. Cool closed containers that are near the source of the fire.

**SECTION 6: Accidental release measures**

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

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with local regulations.

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

Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculit, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

**6.4. Reference to other sections**

Observe protective provisions (see section 7 and 8).

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

**Advices on safe handling**

Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected meeting the accepted standard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes are recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark proof tools. Avoid contact with skin, eyes and clothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. When using do not eat, drink or smoke. Personal protection equipment: refer to section 8. Do not empty containers with pressure - no pressure vessel! Always keep in containers that correspond to the material of the original container. Follow the legal protection and safety regulations.

**Further information**

Vapours are heavier than air. Vapours form explosive mixtures with air.

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

**Requirements for storage rooms and vessels**

Storage in accordance with the Ordinance on Industrial Safety and Health (BetrSiVO). Keep container tightly closed. Do not

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empty containers with pressure - no pressure vessel! Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

**Hints on joint storage**

Keep away from strongly acidic and alkaline materials as well as oxidizers.

**Further information on storage conditions**

Take care of instructions on label. Store in a well-ventilated and dry room at temperatures between 5 °C and 30 °C. Protect from heat and direct sunlight. Keep container tightly closed. Remove all sources of ignition. Smoking is forbidden. Access only for authorised persons. Store carefully closed containers upright to prevent any leaks.

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

Observe technical data sheet. Observe instructions for use.

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

**8.1. Control parameters**

**Occupational exposure limit values**

aluminium powder (stabilised)

Index No. 013-002-00-1 / EC No. 231-072-3 / CAS No. 7429-90-5

WEL, TWA: 10 mg/m<sup>3</sup>

Remark: (inhalable fraction)

WEL, TWA: 4 mg/m<sup>3</sup>

Remark: (respirable fraction)

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

WEL, TWA: 220 mg/m<sup>3</sup>; 50 ppm

WEL, STEL: 441 mg/m<sup>3</sup>; 100 ppm

Remark: (may be absorbed through the skin)

BMGV, TWA: 650 mmol/mol creatinine

Remark: methyl hippuric acid; urine; end of exposure or end of shift

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

EC No. 918-481-9

WEL, TWA: 800 mg/m<sup>3</sup>

Remark: (> or = C7, Cycloalkanes)

WEL, TWA: 1200 mg/m<sup>3</sup>

Remark: (alkanes >= C7)

maleic anhydride

Index No. 607-096-00-9 / EC No. 203-571-6 / CAS No. 108-31-6

WEL, TWA: 1 mg/m<sup>3</sup>

WEL, STEL: 3 mg/m<sup>3</sup>

**Additional information**

TWA : Long-term occupational exposure limit value

STEL : short-term occupational exposure limit value

Ceiling : peak limitation

**DNEL:**

Zinc powder - zinc dust (stabilised)

Index No. 030-001-01-9 / EC No. 231-175-3 / CAS No. 7440-66-6

DNEL long-term dermal (systemic), Workers: 83 mg/kg

DNEL long-term inhalative (systemic), Workers: 5 mg/m<sup>3</sup>

DNEL long-term oral (repeated), Consumer: 0,83 mg/kg

DNEL long-term dermal (systemic), Consumer: 83 mg/kg

DNEL long-term inhalative (systemic), Consumer: 2,5 mg/m<sup>3</sup>

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

DNEL long-term dermal (systemic), Workers: 212 mg/kg

DNEL acute inhalative (local), Workers: 442 mg/m<sup>3</sup>

DNEL acute inhalative (systemic), Workers: 442 mg/m<sup>3</sup>

DNEL long-term inhalative (local), Workers: 221 mg/m<sup>3</sup>

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DNEL long-term inhalative (systemic), Workers: 221 mg/m<sup>3</sup>  
DNEL long-term oral (repeated), Consumer: 12,5 mg/kg  
DNEL long-term dermal (systemic), Consumer: 125 mg/kg  
DNEL acute inhalative (local), Consumer: 260 mg/m<sup>3</sup>  
DNEL acute inhalative (systemic), Consumer: 260 mg/m<sup>3</sup>  
DNEL long-term inhalative (local), Consumer: 65,3 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Consumer: 65,3 mg/m<sup>3</sup>

Hydrocarbons, C9, aromatics

EC No. 918-668-5

DNEL long-term dermal (systemic), Workers: 25 mg/kg  
DNEL long-term inhalative (systemic), Workers: 150 mg/m<sup>3</sup>  
DNEL long-term oral (repeated), Consumer: 11 mg/kg  
DNEL long-term dermal (systemic), Consumer: 11 mg/kg  
DNEL long-term inhalative (systemic), Consumer: 32 mg/m<sup>3</sup>

aluminium powder (stabilised)

Index No. 013-002-00-1 / EC No. 231-072-3 / CAS No. 7429-90-5

DNEL long-term inhalative (local), Workers: 3,72 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Workers: 3,72 mg/m<sup>3</sup>  
DNEL long-term oral (repeated), Consumer: 3,95 mg/kg

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

EC No. 918-481-9

DNEL long-term dermal (systemic), Workers: 300 mg/kg  
DNEL long-term oral (repeated), Consumer: 300 mg/kg  
DNEL long-term dermal (systemic), Consumer: 300 mg/kg  
DNEL long-term inhalative (systemic), Consumer: 900 mg/m<sup>3</sup>

maleic anhydride

Index No. 607-096-00-9 / EC No. 203-571-6 / CAS No. 108-31-6

DNEL acute dermal, short-term (local), Workers: 0,04 mg/kg  
DNEL acute dermal, short-term (systemic), Workers: 0,04 mg/kg  
DNEL long-term dermal (local), Workers: 0,04 mg/kg  
DNEL long-term dermal (systemic), Workers: 0,04 mg/kg  
DNEL acute inhalative (local), Workers: 0,8 mg/m<sup>3</sup>  
DNEL acute inhalative (systemic), Workers: 0,8 mg/m<sup>3</sup>  
DNEL long-term inhalative (local), Workers: 0,4 mg/m<sup>3</sup>  
DNEL long-term inhalative (systemic), Workers: 0,4 mg/m<sup>3</sup>

**PNEC:**

Zinc powder - zinc dust (stabilised)

Index No. 030-001-01-9 / EC No. 231-175-3 / CAS No. 7440-66-6

PNEC aquatic, freshwater: 0,0206 mg/L  
PNEC aquatic, marine water: 0,061 mg/L  
PNEC sediment, freshwater: 117,8 mg/kg  
PNEC sediment, marine water: 56,5 mg/kg  
PNEC, soil: 35,6 mg/kg  
PNEC sewage treatment plant (STP): 0,052 mg/L

Xylene

Index No. 601-022-00-9 / EC No. 215-535-7 / CAS No. 1330-20-7

PNEC aquatic, freshwater: 0,327 mg/L  
PNEC aquatic, marine water: 0,327 mg/L  
PNEC aquatic, intermittent release: 0,327 mg/L  
PNEC sediment, freshwater: 12,46 mg/kg  
PNEC sediment, marine water: 12,46 mg/kg  
PNEC, soil: 2,31 mg/kg  
PNEC sewage treatment plant (STP): 6,58 mg/L

aluminium powder (stabilised)

Index No. 013-002-00-1 / EC No. 231-072-3 / CAS No. 7429-90-5

PNEC aquatic, freshwater: 0,0749 mg/L  
PNEC sewage treatment plant (STP): 20 mg/L

maleic anhydride

Index No. 607-096-00-9 / EC No. 203-571-6 / CAS No. 108-31-6

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PNEC aquatic, freshwater: 0,0428 mg/L  
PNEC aquatic, marine water: 0,0043 mg/L  
PNEC aquatic, intermittent release: 0,4281 mg/L  
PNEC sediment, freshwater: 0,334 mg/kg  
PNEC sediment, marine water: 0,0334 mg/kg  
PNEC, soil: 0,0415 mg/kg  
PNEC sewage treatment plant (STP): 44,6 mg/L

**8.2. Exposure controls**

Provide good ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

**Personal protection equipment**

**Respiratory protection**

If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Use only respiratory protection equipment with CE-symbol including four digit test number. Observe the wear-time limits as specified by the manufacturer. Recommended respiratory protection articles: Inadequately ventilated workplaces and spraying procedures are necessary. Fresh air mask or short-time work combination filter A2-P2 are recommended.

**Hand protection**

For prolonged or repeated handling the following glove material must be used: NBR (Nitrile rubber)

Thickness of the glove material > 0,4 mm ; Breakthrough time: > 480 min.

Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles EN ISO 374

Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

**Eye/face protection**

Wear closely fitting protective glasses in case of splashes.

**Body protection**

Wear antistatic clothing of natural fibers (cotton) or heat resistant synthetic fibers.

**Protective measures**

After contact clean skin thoroughly with water and soap or use appropriate cleanser.

**Environmental exposure controls**

Do not allow to enter into surface water or drains. See section 7. No additional measures necessary.

**SECTION 9: Physical and chemical properties**

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

|                                                 |                                                                                     |
|-------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Physical state:</b>                          | <b>Liquid</b>                                                                       |
| <b>Colour:</b>                                  | <b>silver</b>                                                                       |
| <b>Odour:</b>                                   | <b>by solvent</b>                                                                   |
| <b>Odour threshold:</b>                         | <b>No data available</b>                                                            |
| <b>Melting point/freezing point:</b>            | <b>420 °C</b><br>Source: Zinc powder - zinc dust (stabilised)                       |
| <b>Initial boiling point and boiling range:</b> | <b>124 °C</b><br>Source: Xylene                                                     |
| <b>Flammability:</b>                            | <b>Flammable liquid and vapour.</b>                                                 |
| <b>Lower and upper explosion limit:</b>         |                                                                                     |
| <b>Lower explosion limit:</b>                   | <b>0,7 Vol-%</b><br>Method: literature value<br>Source: Hydrocarbons, C9, aromatics |
| <b>Upper explosion limit:</b>                   | <b>7,5 Vol-%</b><br>Method: literature value<br>Source: Xylene                      |
| <b>Flash point:</b>                             | <b>36 °C</b><br>Method: EN ISO 1523                                                 |
| <b>Auto-ignition temperature:</b>               | <b>400 °C</b>                                                                       |

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Source: Hydrocarbons, C9, aromatics

**Decomposition temperature:** No data available

**pH at 20 °C:** No data available

**Kinematic viscosity (40°C):** > 21 mm<sup>2</sup>/s

**Viscosity at 20 °C:** 80 s 4 mm  
Method: DIN 53211

**Solubility(ies):**  
**Water solubility at 20 °C:** insoluble  
**Partition coefficient: n-octanol/water:** see section 12  
**Vapour pressure at 20 °C:** 14 mbar  
Source: Xylene

**Density and/or relative density:**  
**Density at 20 °C:** 1,22 g/cm<sup>3</sup>  
Method: DIN 53217

**Relative vapour density:** No data available  
**particle characteristics:** not applicable

9.2. **Other information**

**Solid content:** 62 weight-%

**solvent content:**  
**Organic solvents:** 38 weight-%  
**Water:** 0 weight-%

**SECTION 10: Stability and reactivity**

10.1. **Reactivity**

No information available.

10.2. **Chemical stability**

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

10.3. **Possibility of hazardous reactions**

Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.

10.4. **Conditions to avoid**

Hazardous decomposition byproducts may form with exposure to high temperatures.

10.5. **Incompatible materials**

not applicable

10.6. **Hazardous decomposition products**

Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

**SECTION 11: Toxicological information**

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

**Acute toxicity**

Zinc powder - zinc dust (stabilised)  
oral, LD50, Rat: > 2000 mg/kg  
inhalative (dust and mist), LC50, Rat: 5,41 mg/L (4 h)

Xylene

oral, LD50, Rat: 3523 mg/kg  
dermal, LD50, Rabbit: 4200 mg/kg  
inhalative (vapours), LC50, Rat: 10 - 20 mg/L (4 h)

Hydrocarbons, C9, aromatics

oral, LD50, Rat: 2000 - 5000 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: > 2000 mg/kg

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Method: OECD 402  
inhalative (vapours), LC50, Rat: > 10,2 mg/L (4 h)  
aluminium powder (stabilised)  
inhalative (dust and mist), LC50, Rat: > 5 mg/L (4 h)  
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics  
oral, LD50, Rat: > 5000 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: > 5000 mg/kg  
Method: OECD 402  
inhalative (vapours), LC50, Rat: > 4951 mg/L (4 h)  
Method: OECD 403  
maleic anhydride  
oral, LD50, Rat: 1090 mg/kg  
Method: OECD 401  
dermal, LD50, Rabbit: 2620 mg/kg

**Skin corrosion/irritation; Serious eye damage/eye irritation**

Xylene  
Skin  
Irritant — skin irritation and eye damage  
eyes  
mildly irritating

Hydrocarbons, C9, aromatics  
eyes, Rabbit (24 h)  
mild irritant.

maleic anhydride  
Skin  
Causes burns.  
eyes  
Causes burns.

**Respiratory or skin sensitisation**

May cause an allergic skin reaction.

maleic anhydride  
Skin:  
Method: OECD 406  
sensitising

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Based on available data, the classification criteria are not met.

**STOT-single exposure; STOT-repeated exposure**

May cause respiratory irritation.  
May cause drowsiness or dizziness.

Xylene  
Specific target organ toxicity (single exposure), Irritation  
Irritation to respiratory tract  
Hydrocarbons, C9, aromatics  
Specific target organ toxicity (single exposure), Irritation  
Irritation to respiratory tract  
Specific target organ toxicity (single exposure), drowsiness  
Narcotic effects

**Aspiration hazard**

Xylene  
Aspiration hazard  
Hydrocarbons, C9, aromatics  
Aspiration hazard  
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

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Aspiration hazard

**Practical experience/human evidence**

Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

**Overall assessment on CMR properties**

The ingredients in this mixture do not meet the criteria for classification as CMR category 1A or 1B according to CLP.

**Remark**

There is no information available on the preparation itself .

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No information available.

**SECTION 12: Ecological information**

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

There is no information available on the preparation itself .

Do not allow to enter into surface water or drains.

**12.1. Toxicity**

Very toxic to aquatic organisms.

Xylene

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 2,6 mg/L (96 h)

Method: OECD 203

Algae toxicity, EC50, Pseudokirchneriella subcapitata: 4,36 mg/L (73 h)

Method: OECD 201

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 1 mg/L (24 h)

Method: OECD 202

Hydrocarbons, C9, aromatics

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 9,2 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 3,2 mg/L (48 h)

Method: OECD 202

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 2,629 mg/L (72 h)

Method: OECD 201

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): > 1000 mg/L (96 h)

Method: OECD 203

Daphnia toxicity, EC50, Daphnia magna: > 1000 mg/L (48 h)

Method: OECD 202

Algae toxicity, EC50, Pseudokirchneriella subcapitata: > 1000 mg/L

Method: OECD 201

maleic anhydride

Fish toxicity, LC50, Oncorhynchus mykiss (Rainbow trout): 75 mg/L (96 h)

Daphnia toxicity, EC50, Daphnia magna (Big water flea): 42,81 mg/L (48 h)

Method: OECD 202

Algae toxicity, ErC50, Pseudokirchneriella subcapitata: 74,35 mg/L (72 h)

Method: OECD 201

**Long-term Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

Xylene

Fish toxicity, NOEC, Oncorhynchus mykiss (Rainbow trout): > 1,3 mg/L (56 d)

Daphnia toxicity, NOEC, Daphnia sp.: 0,96 mg/L (7 d)

Algae toxicity, NOEC, Pseudokirchneriella subcapitata: 0,44 mg/L (72 h)

Method: OECD 201

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Bacteria toxicity, NOEC, Activated sludge: 157 mg/L (3 h)

Method: OECD 209

maleic anhydride

Daphnia toxicity, NOEC, Daphnia magna (Big water flea): 10 mg/L (21 d)

**12.2. Persistence and degradability**

Xylene

Biodegradation: 87,8 % (28 d); Evaluation Readily biodegradable (according to OECD criteria)

Method: OECD 301F

Hydrocarbons, C9, aromatics

Biodegradation, Degree of elimination:: 89 % (28 d); Evaluation Readily biodegradable (according to OECD criteria)

Method: OECD 301F

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics

Biodegradation: 80 % (28 d); Evaluation Readily biodegradable (according to OECD criteria)

Method: OECD 301F

maleic anhydride

Biodegradation: Evaluation Readily biodegradable (according to OECD criteria)

Method: OECD 301B

**12.3. Bioaccumulative potential**

Xylene

Partition coefficient: n-octanol/water: 2,77 - 3,15

Hydrocarbons, C9, aromatics

Partition coefficient n-octanol /water (log P O/W):: 3,7 - 4,5

maleic anhydride

Partition coefficient: n-octanol/water: -2,61

Method: OECD 107

**Bioconcentration factor (BCF)**

Xylene

Bioconcentration factor (BCF), Oncorhynchus mykiss (Rainbow trout): 25,9

**12.4. Mobility in soil**

Toxicological data are not available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

No information available.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Appropriate disposal / Product**

**Recommendation**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Dispose of waste according to applicable legislation.

**List of proposed waste codes/waste designations in accordance with EWC**

080111\* Waste paint and varnish containing organic solvents or other dangerous substances

\*Hazardous waste according to Directive 2008/98/EC (waste framework directive).

**Appropriate disposal / Package**

**Recommendation**

Non-contaminated packages may be recycled. Vessels not properly emptied are special waste.

**SECTION 14: Transport information**

**14.1. UN number or ID number**

UN 1263

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**14.2. UN proper shipping name**

Land transport (ADR/RID): Paint  
Sea transport (IMDG): PAINT  
Air transport (ICAO-TI / IATA-DGR): Paint

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

3

**14.4. Packing group**

III

**14.5. Environmental hazards**

Land transport (ADR/RID) UMWELTGEFÄHRDEND  
Marine pollutant p

**14.6. Special precautions for user**

Transport always in closed, upright and safe containers. Make sure that persons transporting the product know what to do in case of an accident or leakage.

Advices on safe handling: see parts 6 - 8

**Further information**

**Land transport (ADR/RID)**

Tunnel restriction code D/E

**Sea transport (IMDG)**

EmS-No. F-E, S-E  
in packages <= 5 litres Transport in accordance with 2.3.2.5 of the IMDG Code.

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

No transport as bulk according IBC - Code.

**SECTION 15: Regulatory information**

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

**EU legislation**

**Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]**

Category: P5c FLAMMABLE LIQUIDS

Quantity 1: 5000 t / Quantity 2: 50000 t

Category: E1 Hazardous to the aquatic environment in Category Acute 1 or Chronic 1

Quantity 1: 100 t / Quantity 2: 200 t

**Directive 2004/42/EC on the limitation of emissions of volatile organic compounds**

VOC product category: (Cat. A/i) ; VOC limit value: 500 g/l

Maximum VOC content of the product in a ready to use condition (in g/L): 500

**National regulations**

**Restrictions of occupation**

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

**15.2. Chemical Safety Assessment**

**For the following substances of this mixture a chemical safety assessment has been carried out:**

| EC No.<br>CAS No.      | Designation                                                            | REACH No.        |
|------------------------|------------------------------------------------------------------------|------------------|
| 231-175-3<br>7440-66-6 | Zinc powder - zinc dust (stabilised)                                   | 01-2119467174-37 |
| 918-668-5              | Hydrocarbons, C9, aromatics                                            | 01-2119455851-35 |
| 231-072-3<br>7429-90-5 | aluminium powder (stabilised)                                          | 01-2119529243-45 |
| 215-535-7<br>1330-20-7 | Xylene                                                                 | 01-2119488216-32 |
| 918-481-9              | Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2 % aromatics | 01-2119457273-39 |

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203-571-6 maleic anhydride 01-2119472428-31  
 108-31-6

**SECTION 16: Other information**

**Full text of classification in section 3:**

|                          |                                      |                                                                                                                                                                                                                      |
|--------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aquatic Acute 1 / H400   | Hazardous to the aquatic environment | Very toxic to aquatic organisms.                                                                                                                                                                                     |
| Aquatic Chronic 1 / H410 | Hazardous to the aquatic environment | Very toxic to aquatic life with long lasting effects.                                                                                                                                                                |
| Flam. Liq. 3 / H226      | Flammable liquids                    | Flammable liquid and vapour.                                                                                                                                                                                         |
| STOT SE 3 / H335         | STOT-single exposure                 | May cause respiratory irritation.                                                                                                                                                                                    |
| Aquatic Chronic 2 / H411 | Hazardous to the aquatic environment | Toxic to aquatic life with long lasting effects.                                                                                                                                                                     |
| Asp. Tox. 1 / H304       | Aspiration hazard                    | May be fatal if swallowed and enters airways.                                                                                                                                                                        |
| STOT SE 3 / H336         | STOT-single exposure                 | May cause drowsiness or dizziness.                                                                                                                                                                                   |
| Flam. Sol. 1 / H228      | Flammable solids                     | Flammable solid.                                                                                                                                                                                                     |
| Acute Tox. 4 / H312      | Acute toxicity (dermal)              | Harmful in contact with skin.                                                                                                                                                                                        |
| Acute Tox. 4 / H332      | Acute toxicity (inhalative)          | Harmful if inhaled.                                                                                                                                                                                                  |
| Skin Irrit. 2 / H315     | Skin corrosion/irritation            | Causes skin irritation.                                                                                                                                                                                              |
| Eye Irrit. 2 / H319      | Serious eye damage/eye irritation    | Causes serious eye irritation.                                                                                                                                                                                       |
| STOT RE 2 / H373         | STOT-repeated exposure               | May cause damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard). |
| Acute Tox. 4 / H302      | Acute toxicity (oral)                | Harmful if swallowed.                                                                                                                                                                                                |
| Acute Tox. 3 / H311      | Acute toxicity (dermal)              | Toxic in contact with skin.                                                                                                                                                                                          |
| Skin Corr. 1C / H314     | Skin corrosion/irritation            | Causes severe skin burns and eye damage.                                                                                                                                                                             |
| Eye Dam. 1 / H318        | Serious eye damage/eye irritation    | Causes serious eye damage.                                                                                                                                                                                           |
| Skin Sens. 1B / H317     | Respiratory or skin sensitisation    | May cause an allergic skin reaction.                                                                                                                                                                                 |
| STOT RE 1 / H372         | STOT-repeated exposure               | Causes damage to organs (or state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).    |
| Skin Corr. 1B / H314     | Skin corrosion/irritation            | Causes severe skin burns and eye damage.                                                                                                                                                                             |
| Resp. Sens. 1 / H334     | Respiratory or skin sensitisation    | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                                                                                                                                           |
| Skin Sens. 1A / H317     | Respiratory or skin sensitisation    | May cause an allergic skin reaction.                                                                                                                                                                                 |

**Classification procedure**

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

|                   |                                      |                        |
|-------------------|--------------------------------------|------------------------|
| Flam. Liq. 3      | Flammable liquids                    | On basis of test data. |
| Skin Sens. 1      | Respiratory or skin sensitisation    | Calculation method.    |
| STOT SE 3         | STOT-single exposure                 | Calculation method.    |
| STOT SE 3         | STOT-single exposure                 | Calculation method.    |
| Aquatic Acute 1   | Hazardous to the aquatic environment | Calculation method.    |
| Aquatic Chronic 1 | Hazardous to the aquatic environment | Calculation method.    |

**Abbreviations and acronyms**

|          |                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------|
| ADR      | European Agreement concerning the International Carriage of Dangerous Goods by Road                  |
| OEL      | Occupational Exposure Limit Value                                                                    |
| BLV      | Biological Limit Value                                                                               |
| CAS      | Chemical Abstracts Service                                                                           |
| CLP      | Classification, Labelling and Packaging                                                              |
| CMR      | Carcinogenic, Mutagenic and Reprotoxic                                                               |
| DIN      | German Institute for Standardization / German industrial standard                                    |
| DNEL     | Derived No-Effect Level                                                                              |
| EAKV     | European Waste Catalogue Directive                                                                   |
| EC       | Effective Concentration                                                                              |
| EC       | European Community                                                                                   |
| EN       | European Standard                                                                                    |
| IATA-DGR | International Air Transport Association – Dangerous Goods Regulations                                |
| IBC Code | International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk  |
| ICAO-TI  | International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous |

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|           |                                                                                             |
|-----------|---------------------------------------------------------------------------------------------|
|           | Goods by Air                                                                                |
| IMDG Code | International Maritime Code for Dangerous Goods                                             |
| ISO       | International Organization for Standardization                                              |
| LC        | Lethal Concentration                                                                        |
| LD        | Lethal Dose                                                                                 |
| MAK       | Maximum workplace concentration                                                             |
| MARPOL    | Maritime Pollution: The International Convention for the Prevention of Pollution from Ships |
| OECD      | Organisation for Economic Cooperation and Development                                       |
| PBT       | persistent, bioaccumulative, toxic                                                          |
| PNEC      | Predicted No Effect Concentration                                                           |
| REACH     | Registration, Evaluation, Authorisation and Restriction of Chemicals                        |
| RID       | Regulations concerning the International Carriage of Dangerous Goods by Rail                |
| UN        | United Nations                                                                              |
| VOC       | Volatile Organic Compounds                                                                  |
| vPvB      | very persistent and very bioaccumulative                                                    |

**Data sources**

Data arise from reference works and literature.

**Further information**

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

The information supplied on this safety data sheet complies with our current level of knowledge as well as with national and EU regulations. Without written approval, the product must not be used for purposes different from those mentioned in section 1. It is always the user's duty to take any necessary measures for meeting the requirements laid down by local rules and regulations. The details in this safety data sheet describe the safety requirements of our product and are not to be regarded as guaranteed attributes of the product.