

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.01.2019

Version number 6

Revision: 30.01.2019

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

### 1.1 Product identifier

Trade name: **Zinc Spray**

Article number: 90213

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

No further relevant information available.

Application of the substance / the mixture

Spray varnish

### 1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH  
Lechstrasse 28  
D 90451 Nürnberg

Tel. +49(0)911-642960  
Fax. +49(0)911-644456  
e-mail info@akemi.de

Further information obtainable from:

Laboratory

### 1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH  
Tel. +49(0)911-64296-59  
Reachable during the following office hours:  
Monday – Thursday from 07:30 a.m. to 16:30 p.m.  
Friday from 07:30 a.m. to 13:30 p.m.  
+44 (171) 635 91 91  
National Poison Inform. Centre  
Medical Toxicology Unit  
Avalonley Road  
London SE14 5ER

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF exposed or concerned: Get medical advice/attention.

Storage:

Store in a well-ventilated place. Keep cool.

Store in a well-ventilated place. Keep container tightly closed.

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Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

**2.2 Label elements**

- Labelling according to Regulation (EC) No 1272/2008
- Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS02 GHS07 GHS09

## · Signal word

Danger

## · Hazard-determining components of labelling:

acetone  
 reaction mass of ethylbenzole and xylene  
 Solvent naphtha (petroleum), light arom.  
 propan-2-ol

## · Hazard statements

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.  
 H319 Causes serious eye 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.  
 P103 Read label before use.  
 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.  
 P251 Do not pierce or burn, even after use.  
 P260 Do not breathe spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves / eye protection.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## · Additional information:

Contains 2-butanone oxime. May produce an allergic reaction.

**2.3 Other hazards**

## · Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures**

· Description: Mixture of substances listed below with nonhazardous additions.

## · Dangerous components:

|                            |                                                |        |
|----------------------------|------------------------------------------------|--------|
| CAS: 7440-66-6             | zinc powder -zinc dust (stabilized)            | 25-50% |
| EINECS: 231-175-3          | Aquatic Acute 1, H400; Aquatic Chronic 1, H410 |        |
| Index number: 030-001-01-9 |                                                |        |
| Reg.nr.: 01-2119467174-37  |                                                |        |

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|                                                                                                                     |                                                                                                                                                                                                                |          |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| CAS: 67-64-1<br>EINECS: 200-662-2<br>Index number: 606-001-00-8<br>Reg.nr.: 01-2119471330-49                        | acetone<br>⚠ Flam. Liq. 2, H225<br>⚠ Eye Irrit. 2, H319; STOT SE 3, H336                                                                                                                                       | 12.5-25% |
| CAS: 74-98-6<br>EINECS: 200-827-9<br>Index number: 601-003-00-5<br>Reg.nr.: 01-2119486944-21                        | propane<br>⚠ Flam. Gas 1, H220<br>Press. Gas (Comp.), H280                                                                                                                                                     | 12.5-25% |
| EC number: 905-588-0<br>Reg.nr.: 01-2119488216-32;<br>01-2119486136-34                                              | reaction mass of ethylbenzole and xylene<br>⚠ Flam. Liq. 3, H226<br>⚠ STOT RE 2, H373; Asp. Tox. 1, H304<br>⚠ Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 | 1-5%     |
| CAS: 64742-95-6<br>EINECS: 265-199-0<br>Index number: 649-356-00-4<br>Reg.nr.: 01-2119486773-24<br>01-2119455851-35 | Solvent naphtha (petroleum), light arom.<br>⚠ Flam. Liq. 3, H226<br>⚠ Asp. Tox. 1, H304<br>⚠ Aquatic Chronic 2, H411<br>⚠ Acute Tox. 4, H332; STOT SE 3, H335-H336                                             | 1-5%     |
| CAS: 1314-13-2<br>EINECS: 215-222-5<br>Index number: 030-013-00-7<br>Reg.nr.: 01-2119463881-32                      | zinc oxide<br>⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410                                                                                                                                                 | 1-5%     |
| CAS: 67-63-0<br>EINECS: 200-661-7<br>Index number: 603-117-00-0<br>Reg.nr.: 01-2119457558-25-xxxx                   | propan-2-ol<br>⚠ Flam. Liq. 2, H225<br>⚠ Eye Irrit. 2, H319; STOT SE 3, H336                                                                                                                                   | 1-5%     |
| CAS: 106-97-8<br>EINECS: 203-448-7<br>Index number: 601-004-00-0<br>Reg.nr.: 01-2119474691-32                       | butane<br>⚠ Flam. Gas 1, H220; Flam. Liq. 1, H224<br>Press. Gas (Comp.), H280                                                                                                                                  | 1-5%     |

· Additional information: For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- General information: Immediately remove any clothing soiled by the product.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Do not induce vomiting; call for medical help immediately.

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

Headache  
Dizziness  
Dizziness

**Information for doctor:**

Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps administration of Diazepam 20 mg intravenously.

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

No further relevant information available.

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**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- Suitable extinguishing agents: CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- For safety reasons unsuitable extinguishing agents: Water with full jet
- **5.2 Special hazards arising from the substance or mixture**
  - In case of fire, the following can be released:
  - Carbon monoxide (CO)
  - Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- Protective equipment: Mount respiratory protective device.
- Additional information
  - Cool endangered receptacles with water spray.
  - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **6.2 Environmental precautions:**
  - Wear protective equipment. Keep unprotected persons away.
  - Inform respective authorities in case of seepage into water course or sewage system.
  - Do not allow to enter sewers/ surface or ground water.
  - Do not allow product to reach sewage system or any water course.
- **6.3 Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Ensure adequate ventilation.
  - Do not flush with water or aqueous cleansing agents
  - Dispose contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**
  - Keep away from heat and direct sunlight.
  - Ensure good ventilation/exhaustion at the workplace.
  - Open and handle receptacle with care.
- Information about fire - and explosion protection:
  - Fumes can combine with air to form an explosive mixture.
  - Keep ignition sources away - Do not smoke.
  - Protect against electrostatic charges.
  - Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
  - Do not spray onto a naked flame or any incandescent material.
- **7.2 Conditions for safe storage, including any incompatibilities**
- Storage:
- Requirements to be met by storerooms and receptacles:
  - Store in a cool location.
  - Observe official regulations on storing packagings with pressurised containers.
- Information about storage in one common storage facility:
  - Store away from foodstuffs.

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· Further information about storage conditions:

Keep container tightly sealed.  
Do not seal receptacle gas tight.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

· 7.3 Specific end use(s)

No further relevant information available.

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

· Additional information about design of technical facilities:

No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

**67-64-1 acetone**

WEL Short-term value: 3620 mg/m<sup>3</sup>, 1500 ppm  
Long-term value: 1210 mg/m<sup>3</sup>, 500 ppm

**67-63-0 propan-2-ol**

WEL Short-term value: 1250 mg/m<sup>3</sup>, 500 ppm  
Long-term value: 999 mg/m<sup>3</sup>, 400 ppm

**106-97-8 butane**

WEL Short-term value: 1810 mg/m<sup>3</sup>, 750 ppm  
Long-term value: 1450 mg/m<sup>3</sup>, 600 ppm  
Carc (if more than 0.1% of buta-1.3-diene)

· DNELs

**7440-66-6 zinc powder -zinc dust (stabilized)**

|            |                             |                                                                  |
|------------|-----------------------------|------------------------------------------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 50 mg/kg bw/day (ARB)                                            |
| Dermal     | DNEL ( Langzeit-wiederholt) | 5,000 mg/kg bw/day (ARB)<br>5,000 mg/kg bw/day (BEV)             |
| Inhalative | DNEL (Langzeit-wiederholt)  | 5 mg/m <sup>3</sup> Air (ARB)<br>2.5 mg/m <sup>3</sup> Air (BEV) |

**67-64-1 acetone**

|            |                             |                                                                      |
|------------|-----------------------------|----------------------------------------------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 62 mg/kg bw/day (BEV)                                                |
| Dermal     | DNEL ( Langzeit-wiederholt) | 186 mg/kg bw/day (ARB)<br>62 mg/kg bw/day (BEV)                      |
| Inhalative | DNEL (Kurzzeit-akut)        | 2,420 mg/m <sup>3</sup> Air (ARB)                                    |
|            | DNEL (Langzeit-wiederholt)  | 1,210 mg/m <sup>3</sup> Air (ARB)<br>200 mg/m <sup>3</sup> Air (BEV) |

**reaction mass of ethylbenzole and xylene**

|            |                             |                                                                         |
|------------|-----------------------------|-------------------------------------------------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 1.6 mg/kg bw/day (BEV)                                                  |
| Dermal     | DNEL ( Langzeit-wiederholt) | 180 mg/kg bw/day (ARB)<br>108 mg/kg bw/day (BEV)                        |
| Inhalative | DNEL (Kurzzeit-akut)        | 289-442 mg/m <sup>3</sup> Air (ARB)                                     |
|            |                             | 260 mg/m <sup>3</sup> Air (BEV)                                         |
|            | DNEL (Langzeit-wiederholt)  | 77 mg/m <sup>3</sup> Air (ARB)<br>14.8-65.3 mg/m <sup>3</sup> Air (BEV) |

**64742-95-6 Solvent naphtha (petroleum), light arom.**

|        |                             |                       |
|--------|-----------------------------|-----------------------|
| Oral   | DNEL (Langzeit-wiederholt)  | 11 mg/kg bw/day (BEV) |
| Dermal | DNEL ( Langzeit-wiederholt) | 25 mg/kg bw/day (ARB) |

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|            |                            |                                                                                            |
|------------|----------------------------|--------------------------------------------------------------------------------------------|
| Inhalative | DNEL (Langzeit-wiederholt) | 11 mg/kg bw/day (BEV)<br>150 mg/m <sup>3</sup> Air (ARB)<br>32 mg/m <sup>3</sup> Air (BEV) |
|------------|----------------------------|--------------------------------------------------------------------------------------------|

**1314-13-2 zinc oxide**

|            |                             |                                                                  |
|------------|-----------------------------|------------------------------------------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 0.83 mg/kg bw/day (BEV)                                          |
| Dermal     | DNEL ( Langzeit-wiederholt) | 87 mg/kg bw/day (ARB)<br>87 mg/kg bw/day (BEV)                   |
| Inhalative | DNEL (Langzeit-wiederholt)  | 5 mg/m <sup>3</sup> Air (ARB)<br>2.5 mg/m <sup>3</sup> Air (BEV) |

**67-63-0 propan-2-ol**

|            |                             |                                                                   |
|------------|-----------------------------|-------------------------------------------------------------------|
| Oral       | DNEL (Langzeit-wiederholt)  | 26 mg/kg bw/day (BEV)                                             |
| Dermal     | DNEL ( Langzeit-wiederholt) | 888 mg/kg bw/day (ARB)<br>319 mg/kg bw/day (BEV)                  |
| Inhalative | DNEL (Langzeit-wiederholt)  | 500 mg/m <sup>3</sup> Air (ARB)<br>89 mg/m <sup>3</sup> Air (BEV) |

**· PNECs****7440-66-6 zinc powder -zinc dust (stabilized)**

|                |                                                                                         |
|----------------|-----------------------------------------------------------------------------------------|
| PNEC (wässrig) | 52 mg/l (KA)<br>6.1 mg/l (MW)<br>20.6 mg/l (SW)                                         |
| PNEC (fest)    | 56.6 mg/kg Trockengew (BO)<br>56.5 mg/kg Trockengew (MWS)<br>118 mg/kg Trockengew (SWS) |

**67-64-1 acetone**

|                |                                                                                          |
|----------------|------------------------------------------------------------------------------------------|
| PNEC (wässrig) | 100 mg/l (KA)<br>1.06 mg/l (MW)<br>10.6 mg/l (SW)<br>21 mg/l (WAS)                       |
| PNEC (fest)    | 29.5 mg/kg Trockengew (BO)<br>3.04 mg/kg Trockengew (MWS)<br>30.4 mg/kg Trockengew (SWS) |

**reaction mass of ethylbenzole and xylene**

|                |                                                                                            |
|----------------|--------------------------------------------------------------------------------------------|
| PNEC (wässrig) | 6.58 mg/l (KA)<br>0.327 mg/l (MW)<br>0.327 mg/l (SW)                                       |
| PNEC (fest)    | 2.31 mg/kg Trockengew (BO)<br>12.46 mg/kg Trockengew (MWS)<br>12.46 mg/kg Trockengew (SWS) |

**1314-13-2 zinc oxide**

|                |                                                                                         |
|----------------|-----------------------------------------------------------------------------------------|
| PNEC (wässrig) | 52 mg/l (KA)<br>6.1 mg/l (MW)<br>20.6 mg/l (SW)                                         |
| PNEC (fest)    | 35.6 mg/kg Trockengew (BO)<br>56.5 mg/kg Trockengew (MWS)<br>117 mg/kg Trockengew (SWS) |

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**67-63-0 propan-2-ol**

|                |                                                                                      |
|----------------|--------------------------------------------------------------------------------------|
| PNEC (wässrig) | 2,251 mg/l (KA)<br>140.9 mg/l (MW)<br>140.9 mg/l (SW)<br>140.9 mg/l (WAS)            |
| PNEC (fest)    | 28 mg/kg Trockengew (BO)<br>552 mg/kg Trockengew (MWS)<br>552 mg/kg Trockengew (SWS) |

· Additional information: The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· Personal protective equipment:  
 · General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Do not inhale gases / fumes / aerosols.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

Use skin protection cream for skin protection.

Clean skin thoroughly immediately after handling the product.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device in case of insufficient ventilation.

Filter AX

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).

· Material of gloves

Butyl rubber, BR

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

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- Penetration time of glove material The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.  
Value for the permeation: Level  $\leq$  6, 480 min
- As protection from splashes gloves made of the following materials are suitable: Butyl rubber, BR  
Butoject (KCL, Art. No. 897, 898)  
Nitrile rubber, NBR
- Not suitable are gloves made of the following materials: Leather gloves  
Strong material gloves
- Eye protection:  Tightly sealed goggles
- Body protection: Use protective suit.

**SECTION 9: Physical and chemical properties****· 9.1 Information on basic physical and chemical properties****· General Information****· Appearance:**

Form: Aerosol  
 Colour: Grey  
 Odour: Specific type

· pH-value: Not applicable

**· Change in condition**

Melting point/freezing point: Undetermined.  
 Initial boiling point and boiling range: -44 °C

· Flash point: -97 °C

· Ignition temperature: 465 °C

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

**· Explosion limits:**

Lower: 0.7 Vol %  
 Upper: 13 Vol %

· Vapour pressure at 20 °C: 5,100 hPa

· Density at 20 °C: 1.28 g/cm<sup>3</sup>

**· Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

**· Viscosity:**

Dynamic: Not determined.  
 Not applicable  
 Kinematic: Not determined.  
 Not applicable

**· Solvent content:**

Organic solvents: 44.3 %

**· 9.2 Other information**

No further relevant information available.

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**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

|            |          |                     |
|------------|----------|---------------------|
| Dermal     | LD50     | 47,311 mg/kg        |
| Inhalative | LC50/4 h | >10-10.1 mg/l (rat) |

**7440-66-6 zinc powder -zinc dust (stabilized)**

|            |          |                    |
|------------|----------|--------------------|
| Oral       | LD50     | >2,000 mg/kg (rat) |
| Inhalative | LC50/4 h | >5.4 mg/l (rat)    |

**67-64-1 acetone**

|            |             |                              |
|------------|-------------|------------------------------|
| Oral       | LD50        | 5,800 mg/kg (rat) (OECD 401) |
|            | NOEL        | 900 mg/kg (rat)              |
|            | NOAEL-Werte | 22,500 mg/kg (rat)           |
| Dermal     | LD50        | 15,688 mg/kg (rat)           |
|            |             | >15,800 mg/kg (rbt)          |
| Inhalative | LC50/4 h    | 76 mg/l (rat)                |
|            | LC50/48h    | 2,262 mg/l (daphnia magna)   |

**reaction mass of ethylbenzole and xylene**

|            |          |                      |
|------------|----------|----------------------|
| Oral       | LD50     | 4,300 mg/kg (rat)    |
| Dermal     | LD50     | 2,000 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 6.35-6.7 mg/l (rat)  |

**64742-95-6 Solvent naphtha (petroleum), light arom.**

|            |          |                       |
|------------|----------|-----------------------|
| Oral       | LD50     | >6,800 mg/kg (rat)    |
| Dermal     | LD50     | >3,400 mg/kg (rabbit) |
| Inhalative | LC50/4 h | >10.2 mg/l (rat)      |

**1314-13-2 zinc oxide**

|            |          |                     |
|------------|----------|---------------------|
| Oral       | LD50     | 7,950 mg/kg (mouse) |
|            |          | >5,000 mg/kg (rat)  |
| Dermal     | LD50     | >2,000 mg/kg (rat)  |
| Inhalative | LC50/4 h | >5,700 mg/l (rat)   |

**67-63-0 propan-2-ol**

|      |      |                              |
|------|------|------------------------------|
| Oral | LD50 | >2,000 mg/kg (rabbit)        |
|      |      | 5,840 mg/kg (rat) (OECD 401) |

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|                      |             |                                  |
|----------------------|-------------|----------------------------------|
| Dermal<br>Inhalative | NOAEL-Werte | 400 mg/kg (rat)                  |
|                      | LD50        | 13,900 mg/kg (rabbit) (OECD 402) |
|                      | LC50/8h     | 47.5 ppm (rat)                   |
|                      | LC50/4 h    | 30-46.5 mg/l (rat)               |
|                      | LC50        | 25,000 mg/m <sup>3</sup> (rat)   |
|                      | LC50/48h    | >100 mg/l (Leuciscus idus)       |

**106-97-8 butane**

|            |          |                |
|------------|----------|----------------|
| Inhalative | LC50/4 h | 658 mg/l (rat) |
|------------|----------|----------------|

- Primary irritant effect:
- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- Carcinogenicity Based on available data, the classification criteria are not met.
- Reproductive toxicity Based on available data, the classification criteria are not met.
- STOT-single exposure May cause drowsiness or dizziness.
- STOT-repeated exposure Based on available data, the classification criteria are not met.
- Aspiration hazard May be fatal if swallowed and enters airways.

**SECTION 12: Ecological information**· **12.1 Toxicity**· Aquatic toxicity:**7440-66-6 zinc powder -zinc dust (stabilized)**

|           |                                               |
|-----------|-----------------------------------------------|
| EC50/96h  | 0.527 mg/l (green alge)                       |
| EC50/48h  | 0.353 mg/l (daphnia magna)                    |
| NOEC      | 0.017 mg/kg (Pseudokirchneriella subcapitata) |
| NOELR/72h | 0.0729 mg/l (Pseudokirchneriella subcapitata) |
| NOEC/21d  | 178 mg/l (KA)                                 |
| NOELR/28d | 0.0083 mg/l (Cyprinus carpio)                 |
| EC10      | 0.0273 mg/l (green alge)                      |
|           | 0.0592 mg/l (daphnia magna)                   |
| EC50/48h  | 1 mg/l (daphnia magna)                        |
| EC50/72h  | 0.17 mg/l (Selenastrum capricornutum)         |
| LC50/96h  | 0.41 mg/l (Oncorhynchus mykiss)               |
|           | 0.238-0.269 mg/l (Pimephales promelas)        |

**67-64-1 acetone**

|          |                                        |
|----------|----------------------------------------|
| EC50/96h | 8,300 mg/l (piscis)                    |
|          | 8,300 mg/l (Iepomis macrochirus)       |
|          | 7,500 mg/l (selenastrum capricornutum) |
| EC50     | 1,700 mg/l (bacteria)                  |
| LC50     | 6,368 mg/l (piscis)                    |
| EC5/16h  | 1,700 mg/l (pseudomonas putida)        |
| EC5/72h  | 28 mg/l (Entosiphon sulcatum)          |
| EC5/8d   | 530 mg/l (Microcystis aeruginosa)      |
| IC5/8d   | 7,500 mg/l (Scenedesmus quadricauda)   |
| EC50/48h | 3,400 mg/l (green alge)                |

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|           |                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NOEC      | 8,800 mg/l (daphnia magna)<br>1,700 mg/kg (pseudomonas putida)<br>4,740 mg/kg (selenastrum capricornutum)                                                   |
| NOELR/28d | 2,212 mg/l (daphnia magna)                                                                                                                                  |
| EC50/48h  | 12,600 mg/l (Danio rerio.)<br>6,100 mg/l (daphnia magna)                                                                                                    |
| LC50/96h  | 8,300 mg/l (Iem)<br>8,300 mg/l (Iepomis macrochirus)<br>7,500 mg/l (Leuciscus idus)<br>5,540 mg/l (Oncorhynchus mykiss)<br>8,120 mg/l (Pimephales promelas) |

**reaction mass of ethylbenzole and xylene**

|           |                                                                       |
|-----------|-----------------------------------------------------------------------|
| LC50/24h  | 1 mg/l (daphnia magna)                                                |
| EC50/48h  | 3.2-9.5 mg/l (daphnia magna)                                          |
| NOEC      | 16 mg/l (BES)<br>1.3 mg/l (piscis)                                    |
| NOELR/72h | 0.44 mg/l (green alge)                                                |
| NOELR/28d | 16 mg/l (bacteria)                                                    |
| EC50/72h  | 2.2 mg/l (selenastrum capricornutum)                                  |
| LC50/96h  | 2.6 mg/l (Oncorhynchus mykiss)<br>8.9-16.4 mg/l (pimephales promelas) |

**64742-95-6 Solvent naphtha (petroleum), light arom.**

|          |                                                                                  |
|----------|----------------------------------------------------------------------------------|
| EC50/96h | 19 mg/l (Desmodesmus subspicatus)                                                |
| EC50/48h | 3.2 mg/l (daphnia magna)                                                         |
| LL50/96h | 9.2 mg/l (piscis)                                                                |
| EC50/72h | 2.9 mg/l (Desmodesmus subspicatus)<br>2.6 mg/l (Pseudokirchneriella subcapitata) |
| LC50/96h | >100 mg/l (rainbow trout)                                                        |

**1314-13-2 zinc oxide**

|           |                                                                                       |
|-----------|---------------------------------------------------------------------------------------|
| EC50/48h  | >1,000 mg/l (daphnia magna)                                                           |
| NOELR/72h | 0.017 mg/l (Pseudokirchneriella subcapitata)                                          |
| EC50/48h  | 1 mg/l (daphnia magna)                                                                |
| EC50/72h  | 0.17 mg/l (selenastrum capricornutum)                                                 |
| LC50/96h  | >320 mg/l (Iem)<br>1.1 mg/l (Oncorhynchus mykiss)<br>2,246 mg/l (pimephales promelas) |
| LC50/72h  | 0.17 mg/l (Selenastrum capricornutum)                                                 |

**67-63-0 propan-2-ol**

|            |                                             |
|------------|---------------------------------------------|
| EC50/24h   | 9,714 mg/l (daphnia magna)                  |
| EC50       | >1,000 mg/l (BES)                           |
| LC50/24h   | 9,714 mg/l (daphnia magna)                  |
| EC50/15min | 22,000 mg/l (Photobac. phosphoreum)         |
| IC50/72h   | >1,000 mg/l (Desmodesmus subspicatus)       |
| EC10/18h   | 5,175 mg/l (pseudomonas putida) (DIN 38412) |
| EC50/48h   | 13,299 mg/l (daphnia magna)                 |
| EC50/72h   | >1,000 mg/l (green alge)                    |

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|          |                                     |
|----------|-------------------------------------|
| LC50/96h | >100 mg/l (Scenedesmus subspicatus) |
|          | 6,550 mg/l (piscis)                 |
|          | 9,640 mg/l (Pimephales promelas)    |

· **12.2 Persistence and degradability**

Easily biodegradable

· **12.3 Bioaccumulative potential**

No further relevant information available.

· **12.4 Mobility in soil**

No further relevant information available.

· Ecotoxicological effects:

· Remark:

Very toxic for fish

· Additional ecological information:

· General notes:

Do not allow product to reach ground water, water course or sewage system.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

· PBT:

Not applicable.

· vPvB:

Not applicable.

· **12.6 Other adverse effects**

No further relevant information available.

\* **SECTION 13: Disposal considerations**

· **13.1 Waste treatment methods**

· Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

|           |                                                                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08 00 00  | WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS |
| 08 01 00  | wastes from MFSU and removal of paint and varnish                                                                                                           |
| 08 01 11* | waste paint and varnish containing organic solvents or other hazardous substances                                                                           |

· Uncleaned packaging:

· Recommendation:

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

\* **SECTION 14: Transport information**

· **14.1 UN-Number**

· ADR, IMDG, IATA

UN1950

· **14.2 UN proper shipping name**

· ADR

· IMDG

· IATA

1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS AEROSOLS (zinc powder -zinc dust (stabilized), Solvent naphtha (petroleum), light arom.), MARINE POLLUTANT AEROSOLS

· **14.3 Transport hazard class(es)**

· ADR



· Class

2 5F Gases.

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|                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| · <u>Label</u>                                                                                                                                                      | 2.1                                                                                                                                                                                                                                                                                                                                  |
| · <u>IMDG</u>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                      |
|   |                                                                                                                                                                                                                                                                                                                                      |
| · <u>Class</u>                                                                                                                                                      | 2 Gases.                                                                                                                                                                                                                                                                                                                             |
| · <u>Label</u>                                                                                                                                                      | 2.1                                                                                                                                                                                                                                                                                                                                  |
| · <u>IATA</u>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                      |
|                                                                                    |                                                                                                                                                                                                                                                                                                                                      |
| · <u>Class</u>                                                                                                                                                      | 2 Gases.                                                                                                                                                                                                                                                                                                                             |
| · <u>Label</u>                                                                                                                                                      | 2.1                                                                                                                                                                                                                                                                                                                                  |
| · <b>14.4 Packing group</b>                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                      |
| · <u>ADR</u>                                                                                                                                                        | III                                                                                                                                                                                                                                                                                                                                  |
| · <u>IMDG, IATA</u>                                                                                                                                                 | Void                                                                                                                                                                                                                                                                                                                                 |
| · <b>14.5 Environmental hazards:</b>                                                                                                                                | Product contains environmentally hazardous substances:                                                                                                                                                                                                                                                                               |
| · <u>Marine pollutant:</u>                                                                                                                                          | Symbol (fish and tree)                                                                                                                                                                                                                                                                                                               |
| · <u>Special marking (ADR):</u>                                                                                                                                     | Symbol (fish and tree)                                                                                                                                                                                                                                                                                                               |
| · <b>14.6 Special precautions for user</b>                                                                                                                          | Warning: Gases.                                                                                                                                                                                                                                                                                                                      |
| · <u>Danger code (Kemler):</u>                                                                                                                                      | 23                                                                                                                                                                                                                                                                                                                                   |
| · <u>EMS Number:</u>                                                                                                                                                | F-D,S-U                                                                                                                                                                                                                                                                                                                              |
| · <u>Stowage Code</u>                                                                                                                                               | SW1 Protected from sources of heat.<br>SW22 For AEROSOLS with a maximum capacity of 1 litre:<br>Category A. For AEROSOLS with a capacity above 1 litre:<br>Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.                                                                                                     |
| · <u>Segregation Code</u>                                                                                                                                           | SG69 For AEROSOLS with a maximum capacity of 1 litre:<br>Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre:<br>Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>                                                                                    | Not applicable.                                                                                                                                                                                                                                                                                                                      |
| · <u>Transport/Additional information:</u>                                                                                                                          |                                                                                                                                                                                                                                                                                                                                      |
| · <u>ADR</u>                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                      |
| · <u>Limited quantities (LQ)</u>                                                                                                                                    | 1L                                                                                                                                                                                                                                                                                                                                   |
| · <u>Excepted quantities (EQ)</u>                                                                                                                                   | Code: E0<br>Not permitted as Excepted Quantity                                                                                                                                                                                                                                                                                       |
| · <u>IMDG</u>                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                      |
| · <u>Limited quantities (LQ)</u>                                                                                                                                    | 1L                                                                                                                                                                                                                                                                                                                                   |
| · <u>Excepted quantities (EQ)</u>                                                                                                                                   | Code: E0<br>Not permitted as Excepted Quantity                                                                                                                                                                                                                                                                                       |
| · <u>UN "Model Regulation":</u>                                                                                                                                     | UN 1950 AEROSOLS, 2.1, III, ENVIRONMENTALLY HAZARDOUS                                                                                                                                                                                                                                                                                |

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### SECTION 15: Regulatory information

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

· Directive 2012/18/EU· Named dangerous substances - ANNEX I

None of the ingredients is listed.

· Seveso categoryE1 Hazardous to the Aquatic Environment  
P3a FLAMMABLE AEROSOLS· Qualifying quantity (tonnes) for the application of lower-tier requirements

100 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements

200 t

· REGULATION (EC) No 1907/2006 ANNEX XVII

Conditions of restriction: 3

· National regulations:· Waterhazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

· VOC EU

567.5 g/l

· **15.2 Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H220 Extremely flammable gas.  
H224 Extremely flammable liquid and vapour.  
H225 Highly flammable liquid and vapour.  
H226 Flammable liquid and vapour.  
H280 Contains gas under pressure; may explode if heated.  
H304 May be fatal if swallowed and enters airways.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.  
refer to Technical Data Sheet (TDS)

· Recommended restriction of use· Department issuing SDS:

Laboratory

· Contact:

Dieter Zimmermann

· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organisation  
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)

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LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Flam. Gas 1: Flammable gases – Category 1  
 Aerosol 1: Aerosols – Category 1  
 Press. Gas (Comp.): Gases under pressure – Compressed gas  
 Flam. Liq. 1: Flammable liquids – Category 1  
 Flam. Liq. 2: Flammable liquids – Category 2  
 Flam. Liq. 3: Flammable liquids – Category 3  
 Acute Tox. 4: Acute toxicity – Category 4  
 Skin Irrit. 2: Skin corrosion/irritation – Category 2  
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
 Asp. Tox. 1: Aspiration hazard – Category 1  
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1  
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2  
 REACH directive 1907/2006/EC

· Sources

 · \* Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC

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