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

1.1 Product identifier
   Trade name: Sample Agent Zinc Spray bright E 750 ml 17-09029
   Material number: 08835807Z

1.2 Relevant identified uses of the substance or mixture and uses advised against
   This information is not available.

1.3 Details of the supplier of the safety data sheet
   Company: ECKART GmbH
   Guentersthal 4
   91235 Hartenstein
   Telephone: +4991527770
   Telefax: +499152777008
   E-mail address of person responsible for the SDS: msds.eckart@altana.com

1.4 Emergency telephone number
   GBK Gefahrstoff Büro GmbH, Ingelheim, Germany:
   From outside US: (001) 352-323-3500
   (First call in English, response in your language is possible)
   US & Canada (toll free): 1-800-5355-053

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification (REGULATION (EC) No 1272/2008)
   Flammable liquids, Category 2: H225: Highly flammable liquid and vapour.
   Skin irritation, Category 2: H315: Causes skin irritation.
   Eye irritation, Category 2: H319: Causes serious eye irritation.
   Specific target organ toxicity - single exposure, Category 3, Central nervous system: H336: May cause drowsiness or dizziness.
   Specific target organ toxicity - repeated exposure, Category 2: H373: May cause damage to organs through prolonged or repeated exposure.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Sample Agent Zinc Spray bright E 750 ml 17-09029

Version 2.0  Revision Date: 27.01.2016  SDS Number: 102000005084  Print Date: 20.11.2018  Date of first issue: 13.02.2014

Chronic aquatic toxicity, Category 2
H411: Toxic to aquatic life with long lasting effects.

Classification (67/548/EEC, 1999/45/EC)
Highly flammable
R11: Highly flammable.

Harmful
R20/21: Harmful by inhalation and in contact with skin.

Irritant
R36: Irritating to eyes.

Dangerous for the environment
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Signal word: Danger

Hazard pictograms:

Hazard statements:
H225: Highly flammable liquid and vapour.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H373: May cause damage to organs through prolonged or repeated exposure.
H411: Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P260: Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273: Avoid release to the environment.
P280: Wear protective gloves/ eye protection/ face protection.

Response:
P370 + P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Hazardous components which must be listed on the label:
1330-20-7 xylene
141-78-6 ethyl acetate
2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Hazardous components</th>
<th>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Concentration (% w/w)</th>
<th>Classification</th>
<th>Classification</th>
<th>Concentration (% w/w)</th>
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<td>(REGULATION (EC) No 1272/2008)</td>
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<td>Skin Irrit. Skin Irrit.</td>
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<td>H315</td>
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<td>Aquatic Ac. Aquatic Ac.</td>
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<td>Aquatic Chronic Aquatic Chronic</td>
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<td></td>
<td></td>
<td>H228</td>
<td>H228</td>
</tr>
</tbody>
</table>

123-86-4  n-butyl acetate
67-64-1  acetone
71-36-3  butan-1-ol
## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**General advice**

- Move the victim to fresh air.
- Do not leave the victim unattended.
- Move out of dangerous area.
- Show this safety data sheet to the doctor in attendance.

**If inhaled**

- Consult a physician after significant exposure.
- If unconscious place in recovery position and seek medical advice.

**In case of skin contact**

- Wash off immediately with soap and plenty of water.
- If skin irritation persists, call a physician.
- If on skin, rinse well with water.
- If on clothes, remove clothes.

**In case of eye contact**

- Immediately flush eye(s) with plenty of water.
- Immediately flush eye(s) with plenty of water.
- Remove contact lenses.
- Keep eye wide open while rinsing.
- If eye irritation persists, consult a specialist.

**If swallowed**

- Keep respiratory tract clear.
- Do not give milk or alcoholic beverages.
- Never give anything by mouth to an unconscious person.
- If symptoms persist, call a physician.

---

### Table: Chemicals and R- and H- Phrases

<table>
<thead>
<tr>
<th>Chemicals</th>
<th>R- and H-phrases</th>
<th>Concentration</th>
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</thead>
<tbody>
<tr>
<td>ethylbenzene</td>
<td>R11, Xn; R20-R48/20-R65, Flam. Liq. 2; H225 Acute Tox. 4; H332 STOT RE 2; H373 Asp. Tox. 1; H304</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td>butan-1-ol</td>
<td>R10, Xn; R22 Xl; R37/38-R41-R67, Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335, H336</td>
<td>&gt;= 1 - &lt; 3</td>
</tr>
<tr>
<td>Quaternary ammonium compounds, coco alkylethyl-dimethyl, Et sulfates</td>
<td>Xn-C-N; R22-R34-R50, Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400</td>
<td>&gt;= 0.25 - &lt; 1</td>
</tr>
</tbody>
</table>

For the full text of the R-phrases mentioned in this Section, see Section 16.
For the full text of the H-Statements mentioned in this Section, see Section 16.
For explanation of abbreviations see section 16.
Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed
Symptoms : No information available.
Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed
Treatment : No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media : Dry sand
                                ABC powder
                                Foam

Unsuitable extinguishing media : Water

5.2 Special hazards arising from the substance or mixture
Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters
Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Personal precautions : Evacuate personnel to safe areas.
                       Use personal protective equipment.
                       Ensure adequate ventilation.
                       Remove all sources of ignition.
                       Evacuate personnel to safe areas.
                       Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Sample Agent Zinc Spray bright E 750 ml 17-09029

Version 2.0  Revision Date: 27.01.2016  SDS Number: 102000005084  Print Date: 20.11.2018
Date of first issue: 13.02.2014

6.2 Environmental precautions
Environmental precautions: Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up
Methods for cleaning up: Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush with water.

6.4 Reference to other sections
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling: Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities
Requirements for storage areas and containers: Earthing of containers and apparatuses is essential. Reaction with water liberates extremely flammable gas (hydrogen) Take
measures to prevent the build up of electrostatic charge. Use explosion-proof equipment. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Keep away from sources of ignition - No smoking. Keep container closed when not in use.

No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions: Protect from humidity and water.

Advice on common storage:
- Do not store near acids.
- Do not store together with oxidizing and self-igniting products.
- Never allow product to get in contact with water during storage.
- Keep away from oxidizing agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Other data:
- No decomposition if stored and applied as directed.

7.3 Specific end use(s)
This information is not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>xylene</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Further information</td>
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<tr>
<td>Further information</td>
</tr>
<tr>
<td>zinc powder - zinc dust (stabilized)</td>
</tr>
</tbody>
</table>
Further information: The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable)</th>
<th>STEL</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl acetate</td>
<td>200 ppm</td>
<td></td>
<td>GB EH40</td>
</tr>
<tr>
<td>n-butyl acetate</td>
<td>150 ppm</td>
<td>724 mg/m³</td>
<td>GB EH40</td>
</tr>
<tr>
<td>acetone</td>
<td>500 ppm</td>
<td>1,210 mg/m³</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td>aluminium powder</td>
<td>10 mg/m³</td>
<td></td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

Further information: The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg/m³ 8-hour TWA of inhalable dust or 4 mg/m³ 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
Further information

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m\(^{-3}\) 8-hour TWA of inhalable dust or 4 mg.m\(^{-3}\) 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>TWA (Respirable)</th>
<th>4 mg/m(^3)</th>
<th>GB EH40</th>
</tr>
</thead>
</table>

Further information

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m\(^{-3}\) 8-hour TWA of inhalable dust or 4 mg.m\(^{-3}\) 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>TWA (inhalable dust)</th>
<th>10 mg/m(^3)</th>
<th>GB EH40</th>
</tr>
</thead>
</table>

Further information

For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust. The
COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m\(^{-3}\) 8-hour TWA of inhalable dust or 4 mg.m\(^{-3}\) 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit. Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed ‘inhalable’ and ‘respirable’. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3. Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TWA (Respirable dust)</th>
<th>STEL</th>
<th>GB EH40</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylbenzene</td>
<td>4 mg/m(^3)</td>
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<tr>
<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skin, Indicative</td>
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<td>Further information</td>
<td>Identifies the possibility of significant uptake through the skin, Indicative</td>
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<tr>
<td>TWA</td>
<td>100 ppm</td>
<td>200 ppm</td>
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<tr>
<td>442 mg/m(^3)</td>
<td>884 mg/m(^3)</td>
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<tr>
<td>Further information</td>
<td>Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.</td>
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</tr>
</tbody>
</table>
Further information: Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

<table>
<thead>
<tr>
<th>Substance name</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Sampling time</th>
<th>Basis</th>
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<tbody>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>methyl hippuric acid: 650 mmol/mol creatinine (Urine)</td>
<td>Post shift</td>
<td>GB EH40 BAT</td>
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Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
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<tbody>
<tr>
<td>xylene (1330-20-7)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
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</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
<td>289 mg/m3</td>
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<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
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</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>180 mg/kg</td>
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<tr>
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</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>174 mg/m3</td>
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</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
<td>174 mg/m3</td>
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<td>Consumers</td>
<td>Skin contact</td>
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<td>Consumers</td>
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<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
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<tr>
<td>zinc (7440-66-6)</td>
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<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>5 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>83 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>0.83 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>83 mg/kg</td>
</tr>
</tbody>
</table>
Consumers  | Inhalation  | long term – systemic effects | 2.5 mg/m³
--- | --- | --- | ---
ethyl acetate (141-78-6)  | Workers  | Inhalation  | short term – local effects | 1468 mg/m³
Workers  | Inhalation  | short term – systemic effects | 1468 mg/m³
Workers  | Inhalation  | long term – local effects | 734 mg/m³
Workers  | Skin contact  | long term – systemic effects | 63 mg/kg
Workers  | Inhalation  | long term – systemic effects | 734 mg/m³
Consumers  | Inhalation  | short term – local effects | 734 mg/m³
Consumers  | Inhalation  | short term – systemic effects | 734 mg/m³
Consumers  | Inhalation  | long term – local effects | 367 mg/m³
Consumers  | Skin contact  | long term – systemic effects | 37 mg/kg
Consumers  | Inhalation  | long term – systemic effects | 367 mg/m³
Consumers  | Ingestion  | long term – systemic effects | 4.5 mg/kg
n-butyl acetate (123-86-4)  | Workers  | Inhalation  | short term – local effects | 960 mg/m³
Workers  | Inhalation  | short term – systemic effects | 960 mg/m³
Workers  | Inhalation  | long term – local effects | 480 mg/m³
Workers  | Inhalation  | long term – systemic effects | 480 mg/m³
Consumers  | Inhalation  | short term – local effects | 859.7 mg/m³
Consumers  | Inhalation  | short term – systemic effects | 859.7 mg/m³
Consumers  | Inhalation  | long term – local effects | 102.34 mg/m³
Consumers  | Inhalation  | long term – systemic effects | 102.34 mg/m³
acetone (67-64-1)  | Workers  | Skin contact  | long term – systemic | 186 mg/kg
### Effects

<table>
<thead>
<tr>
<th>Worker/Consumer</th>
<th>Route of Exposure</th>
<th>Duration</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>1210 mg/m3</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>200 mg/m3</td>
</tr>
<tr>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>2420 mg/m3</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy (64742-48-9)</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>300 mg/kg</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>900 mg/m3</td>
</tr>
<tr>
<td>butan-1-ol (71-36-3)</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>310 mg/m3</td>
</tr>
<tr>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>55 mg/m3</td>
</tr>
<tr>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>3.125 mg/kg</td>
</tr>
</tbody>
</table>

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

<table>
<thead>
<tr>
<th>Substance name</th>
<th>Environmental Compartment</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene (1330-20-7)</td>
<td>Soil</td>
<td>2.31 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0.327 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>12.46 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.327 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>12.46 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>6.58 mg/l</td>
</tr>
<tr>
<td>zinc (7440-66-6)</td>
<td>Fresh water</td>
<td>0.0206 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>117.8 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.0061 mg/l</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>0.052 mg/l</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>35.6 mg/kg</td>
</tr>
</tbody>
</table>
Marine sediment | 56.5 mg/kg
---|---
ethyl acetate (141-78-6) | 
Soil | 0.148 mg/kg
STP | 650 mg/l
Fresh water | 0.24 mg/l
Marine water | 0.024 mg/l
Fresh water sediment | 1.15 mg/kg
Marine sediment | 0.115 mg/kg

n-butyl acetate (123-86-4) | 
Soil | 0.0903 mg/kg
Fresh water | 0.18 mg/l
Fresh water sediment | 0.981 mg/kg
STP | 35.6 mg/l
Marine water | 0.018 mg/l
Marine sediment | 0.0981 mg/kg

acetone (67-64-1) | 
Soil | 29.5 mg/kg
Fresh water | 10.6 mg/l
Fresh water sediment | 30.4 mg/kg
Marine water | 1.06 mg/l
Marine sediment | 3.04 mg/kg
STP | 100 mg/l

butan-1-ol (71-36-3) | 
Soil | 0.015 mg/kg
Fresh water | 0.082 mg/l
Fresh water sediment | 0.178 mg/kg
STP | 2476 mg/l
Marine water | 0.0082 mg/l
Marine sediment | 0.0178 mg/kg

Sporadic Release | 2.25 mg/l

### 8.2 Exposure controls

**Personal protective equipment**

**Eye protection**
- Goggles
- Wear face-shield and protective suit for abnormal processing problems.

**Hand protection**
- Material: Solvent-resistant gloves (butyl-rubber)

**Remarks**
- Take note of the information given by the producer concern-
ing permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). The exact break through time can be obtained from the protective glove producer and this has to be observed. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Recommended preventive skin protection Skin should be washed after contact. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection  : Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection  : Use suitable breathing protection if workplace concentration requires.

In the case of vapour formation use a respirator with an approved filter.

Environmental exposure controls
Water  : The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour</td>
<td>characteristic</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>55 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>-19 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>ca. 1 g/cm³</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
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Sample Agent Zinc Spray bright E 750 ml 17-09029

Bulk density : No data available
Water solubility : No data available
Solubility in other solvents : No data available
Partition coefficient: n-octanol/water : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity
  Viscosity, dynamic : see user defined free text
  Viscosity, kinematic : > 21 mm²/s (40 °C)
Flow time : 13 - 16 s at 20 °C
  Cross section: 4 mm
  Method: DIN 53211

Explosive properties : No data available
Oxidizing properties : No data available

9.2 Other information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No decomposition if stored and applied as directed.

10.2 Chemical stability
No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions
Hazardous reactions : Contact with acids and alkalis may release hydrogen.
  Stable under recommended storage conditions.
  Vapours may form explosive mixture with air.

10.4 Conditions to avoid
Conditions to avoid : Do not allow evaporation to dryness.
  Heat, flames and sparks.

10.5 Incompatible materials
Materials to avoid : Acids
  Bases
  Oxidizing agents

10.6 Hazardous decomposition products
Contact with water or humid air : This information is not available.
Thermal decomposition : This information is not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Components:

1330-20-7:
Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg
Method: Converted acute toxicity point estimate

7440-66-6:
Acute oral toxicity : (Rat): > 2,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): 5.41 mg/l
Exposure time: 4 h

141-78-6:
Acute inhalation toxicity : LC50 (Rat): 56 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 18,000 mg/kg

67-64-1:
Acute oral toxicity : LD50 (Rat): 4,700 - 5,800 mg/kg
Acute inhalation toxicity : LC50 (Rat): 76 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

7429-90-5:
Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
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Version 2.0 Revision Date: 27.01.2016 SDS Number: 102000005084 Print Date: 20.11.2018
Date of first issue: 13.02.2014

Exposure time: 4 h
Test atmosphere: dust/mist

100-41-4:
Acute oral toxicity: LD50 (Rat): 3,500 mg/kg
Acute dermal toxicity: LD50 (Rabbit): 5,000 mg/kg

71-36-3:
Acute oral toxicity: Acute toxicity estimate: 500 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation

Product:
Remarks: May cause skin irritation and/or dermatitis.

Components:
67-64-1:
Remarks: Repeated or prolonged contact with the mixture may cause removal of natural fat from the skin resulting in desiccation of the skin.

Serious eye damage/eye irritation

Product:
Remarks: May cause irreversible eye damage.

Components:
1330-20-7:
Result: Eye irritation

67-64-1:
Remarks: Severe eye irritation

Respiratory or skin sensitisation

Components:
1330-20-7:
Assessment: Harmful in contact with skin or if inhaled

STOT - single exposure

Components:
1330-20-7:
Assessment: May cause respiratory irritation.

STOT - repeated exposure

Components:
1330-20-7: Assessment: May cause damage to organs through prolonged or repeated exposure.

**Components:**

1330-20-7:
Aspiration toxicity

**Components:**

1330-20-7:
May be fatal if swallowed and enters airways.

**Further information**

**Product:**
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

**SECTION 12: Ecological information**

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential

**Components:**

123-86-4:
Partition coefficient: n-octanol/water: log Pow: 2.3

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment

**Product:**
Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

**Product:**
Additional ecological information: Remarks: An environmental hazard cannot be excluded in the...
SECTION 13: Disposal considerations

European Waste Catalogue: 08 01 11 - waste paint and varnish containing organic solvents or other dangerous substances

13.1 Waste treatment methods

Product: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. In accordance with local and national regulations.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum. In accordance with local and national regulations.

SECTION 14: Transport information

14.1 UN number

ADR: UN 1263
IMDG: UN 1263
IATA: UN 1263

14.2 UN proper shipping name

ADR: PAINT
IMDG: PAINT (, Zinc powder, stabilized)
IATA: Paint

14.3 Transport hazard class(es)

ADR: 3
IMDG: 3
IATA: 3

14.4 Packing group

ADR
Packing group: II
Classification Code: F1
Hazard Identification Number: 33
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Sample Agent Zinc Spray bright E 750 ml 17-09029

Version 2.0 Revision Date: 27.01.2016 SDS Number: 102000005084 Print Date: 20.11.2018 Date of first issue: 13.02.2014

<table>
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<th>Version</th>
<th>Revision Date</th>
<th>SDS Number</th>
<th>Print Date</th>
<th>Date of first issue</th>
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<tr>
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<td>27.01.2016</td>
<td>102000005084</td>
<td>20.11.2018</td>
<td>13.02.2014</td>
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Labels: 3
Tunnel restriction code: (D/E)

IMDG
Packing group: II
Labels: 3

IATA
Packing instruction (cargo aircraft): 364
Packing instruction (passenger aircraft): 353
Packing instruction (LQ): Y341
Packing group: II
Labels: Flammable Liquids

14.5 Environmental hazards

ADR
Environmentally hazardous: yes

IMDG
Marine pollutant: yes

14.6 Special precautions for user
Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of R-Phrases

R10: Flammable.
R11: Highly flammable.
R20: Harmful by inhalation.
R20/21: Harmful by inhalation and in contact with skin.
R22: Harmful if swallowed.
R34: Causes burns.
R36: Irritating to eyes.
R37/38: Irritating to respiratory system and skin.
R38: Irritating to skin.
SAFETY DATA SHEET
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Sample Agent Zinc Spray bright E 750 ml 17-09029

Version 2.0
Revision Date: 27.01.2016
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R41 : Risk of serious damage to eyes.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R50 : Very toxic to aquatic organisms.
R53 : May cause long-term adverse effects in the aquatic environment.
R65 : Harmful: may cause lung damage if swallowed.
R66 : Repeated exposure may cause skin dryness or cracking.
R67 : Vapours may cause drowsiness and dizziness.

Full text of H-statements
H225 : Highly flammable liquid and vapour.
H226 : Flammable liquid and vapour.
H228 : Flammable solid.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H318 : Causes serious eye damage.
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.

Full text of other abbreviations
Acute Tox. : Acute toxicity
Aquatic Acute : Acute aquatic toxicity
Aquatic Chronic : Chronic aquatic toxicity
Asp. Tox. : Aspiration hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Flam. Sol. : Flammable solids
Skin Corr. : Skin corrosion
Skin Irrit. : Skin irritation
STOT RE : Specific target organ toxicity - repeated exposure
STOT SE : Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - In-
Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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