SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Sample Agent Alu Zinc Spray 17-09013

Version 1.0       Revision Date 13.01.2014       Print Date 20.11.2018

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

1.1 Product identifier

   Trade name : Sample Agent Alu Zinc Spray 17-09013

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 : +499152770
   Telefax : +499152777008
   E-mail address : msds.eckart@altana.com
   Responsible/issuing person

1.4 Emergency telephone number

   GBK Gefahrgut 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.
   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.  
R66: Repeated exposure may cause skin dryness or cracking.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :  
- Flammable liquid
- Caution: Risk of explosion
- Flammable gas

Signal word : Danger

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

Precautionary statements:

Prevention:
- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 Keep container tightly closed.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P273 Avoid release to the environment.

Response:
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Hazardous components which must be listed on the label:
- 141-78-6 ethyl acetate

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2 Mixtures
## Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl acetate</td>
<td>141-78-6 205-500-4 01-2119475103-46</td>
<td>F; R11 Xi; R36 R66 R67</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 20 - &lt; 25</td>
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<tr>
<td>acetone</td>
<td>67-64-1 200-662-2 01-2119471330-49</td>
<td>F; R11 Xi; R36 R66 R67</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 15 - &lt; 20</td>
</tr>
<tr>
<td>xylene</td>
<td>1330-20-7 215-535-7 01-2119488216-32</td>
<td>R10 Xn; R20/21 Xi; R38</td>
<td>Flam. Liq. 3; H226 Acute Tox. 4; H312 Acute Tox. 4; H332 Skin Irrit. 2; H315</td>
<td>&gt;= 12.5 - &lt; 20</td>
</tr>
<tr>
<td>n-butyl acetate</td>
<td>123-86-4 204-658-1 01-2119485493-29</td>
<td>R10 R66 R67</td>
<td>Flam. Liq. 3; H226 STOT SE 3; H336</td>
<td>&lt; 10</td>
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<tr>
<td>aluminium</td>
<td>7429-90-5 231-072-3 01-2119529243-45</td>
<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&lt; 10</td>
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<tr>
<td>zinc</td>
<td>7440-66-6 231-175-3 01-2119467174-37</td>
<td>N; R50-R53</td>
<td>Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&gt;= 2.5 - &lt; 10</td>
</tr>
<tr>
<td>Naphtha (petroleum), hydrotreated heavy</td>
<td>64742-48-9 265-150-3</td>
<td>Xn; R65</td>
<td>Asp. Tox. 1; H304</td>
<td>&gt;= 1 - &lt; 10</td>
</tr>
<tr>
<td>butan-1-ol</td>
<td>71-36-3 200-751-6 01-2119484630-38</td>
<td>R10 Xn; R22 Xi; R37/38-R41 R67</td>
<td>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>zinc oxide</td>
<td>1314-13-2 215-222-5</td>
<td>N; R50-R53</td>
<td>Aquatic Acute 1; H400 Aquatic Chronic 1; H410</td>
<td>&gt;= 0.25 - &lt; 2.5</td>
</tr>
</tbody>
</table>
SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

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

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

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.
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, Special powder against metal fire

Unsuitable extinguishing media : ABC powder, Carbon dioxide (CO2), Water, Foam

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 fire fighting 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 : 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. Evacuate personnel to safe areas.
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 materials for containment and cleaning up

Methods for cleaning up: 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.

Use mechanical handling equipment. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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: 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. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

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.

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. Keep away from oxidising agents and strongly acid or alkaline materials. Never allow product to get in contact with water during storage. Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

German storage class: 4.1B, Flammable solid hazardous materials

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>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>TWA</td>
<td>200 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>ethyl acetate</td>
<td>141-78-6</td>
<td>STEL</td>
<td>400 ppm</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>TWA</td>
<td>500 ppm 1,210 mg/m³</td>
<td>2000-06-16</td>
<td>2000/39/EC</td>
</tr>
<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>STEL</td>
<td>1,500 ppm 3,620 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>TWA</td>
<td>50 ppm 220 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>xylene</td>
<td>1330-20-7</td>
<td>STEL</td>
<td>100 ppm 441 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>n-butyl acetate</td>
<td>123-86-4</td>
<td>TWA</td>
<td>150 ppm 724 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
<tr>
<td>n-butyl acetate</td>
<td>123-86-4</td>
<td>STEL</td>
<td>200 ppm 966 mg/m³</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</tr>
</tbody>
</table>

### Further information

- **Indicative**: Can be absorbed through skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.
- **Identifies the possibility of significant uptake through the skin**

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**Further information**

- *Acetone 67-64-1*: 
  - TWA: 500 ppm, 1,210 mg/m³ (2000-06-16, 2000/39/EC)
  - STEL: 1,500 ppm, 3,620 mg/m³ (2005-04-06, GB EH40)

- *Xylene 1330-20-7*: 
  - TWA: 50 ppm, 220 mg/m³ (2005-04-06, GB EH40)
  - STEL: 100 ppm, 441 mg/m³ (2005-04-06, GB EH40)

- *n-Butyl Acetate 123-86-4*: 
  - TWA: 150 ppm, 724 mg/m³ (2005-04-06, GB EH40)
  - STEL: 200 ppm, 966 mg/m³ (2005-04-06, GB EH40)
### aluminium 7429-90-5

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Value</th>
<th>Date</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2011-12-01</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.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. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Value</th>
<th>Date</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA (Respirable)</td>
<td>4 mg/m³</td>
<td>2011-12-01</td>
<td>GB EH40</td>
</tr>
</tbody>
</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 respiratory system.
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.

### Components

<table>
<thead>
<tr>
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<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
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<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>zinc</td>
<td>7440-66-6</td>
<td>TWA (Inhalable)</td>
<td>10 mg/m³</td>
<td>2011-12-01</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.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. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.
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.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. Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used.

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>butan-1-ol</td>
<td>71-36-3</td>
<td>STEL</td>
<td>50 ppm 154 mg/m(^3)</td>
<td>2005-04-06</td>
<td>GB EH40</td>
</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.

Components

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>naphthalene</td>
<td>91-20-3</td>
<td>TWA</td>
<td>10 ppm 50 mg/m(^3)</td>
<td>1991-07-05</td>
<td>91/322/EEC</td>
</tr>
</tbody>
</table>

Further information

Indicative

**DNEL:**

**ethyl acetate (141-78-6)**

End Use: Workers
Exposure routes: Inhalation
Potential health effects: short term – local effects
Value: 1468 mg/m\(^3\)

**DNEL:**

**ethyl acetate (141-78-6)**

End Use: Workers
Exposure routes: Inhalation
Potential health effects: short term – systemic effects
Value: 1468 mg/m\(^3\)

**DNEL:**

**ethyl acetate (141-78-6)**

End Use: Workers
Exposure routes: Inhalation
Potential health effects: long term – local effects
Value: 734 mg/m\(^3\)
ethyl acetate (141-78-6)

End Use: Workers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 63 mg/kg

DNEL:
ethyl acetate (141-78-6)  

End Use: Workers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 734 mg/m³

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – local effects
Value: 734 mg/m³

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: short term – systemic effects
Value: 734 mg/m³

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – local effects
Value: 367 mg/m³

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 37 mg/kg

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 367 mg/m³

DNEL:
ethyl acetate (141-78-6)  

End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 4.5 mg/kg
<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetone (67-64-1)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>Long term – systemic effects</td>
<td>186 mg/kg</td>
</tr>
<tr>
<td><strong>DNEL:</strong></td>
<td>Acetone (67-64-1)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>1210 mg/m3</td>
</tr>
<tr>
<td>Acetone (67-64-1)</td>
<td>Consumers</td>
<td>Ingestion</td>
<td>Long term – systemic effects</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td><strong>DNEL:</strong></td>
<td>Acetone (67-64-1)</td>
<td>Consumers</td>
<td>Skin contact</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td>Acetone (67-64-1)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>Long term – systemic effects</td>
<td>200 mg/m3</td>
</tr>
<tr>
<td><strong>DNEL:</strong></td>
<td>Xylene (1330-20-7)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>289 mg/m3</td>
</tr>
<tr>
<td>Xylene (1330-20-7)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>Short term – local effects</td>
<td>289 mg/m3</td>
</tr>
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<td><strong>DNEL:</strong></td>
<td>Xylene (1330-20-7)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>77 mg/m3</td>
</tr>
</tbody>
</table>
xylene (1330-20-7)  
End Use: Workers  
Exposure routes: Skin contact  
Potential health effects: long term – systemic effects  
Value: 180 mg/kg

**DNEL:**  
xylene (1330-20-7)  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: short term – local effects  
Value: 174 mg/m³

**DNEL:**  
xylene (1330-20-7)  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: short term – systemic effects  
Value: 174 mg/m³

**DNEL:**  
xylene (1330-20-7)  
End Use: Consumers  
Exposure routes: Skin contact  
Potential health effects: long term – systemic effects  
Value: 108 mg/kg

**DNEL:**  
xylene (1330-20-7)  
End Use: Consumers  
Exposure routes: Inhalation  
Potential health effects: long term – systemic effects  
Value: 14.8 mg/m³

**DNEL:**  
xylene (1330-20-7)  
End Use: Consumers  
Exposure routes: Ingestion  
Potential health effects: long term – systemic effects  
Value: 1.6 mg/kg

**DNEL:**  
n-butyl acetate (123-86-4)  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: short term – local effects  
Value: 960 mg/m³

**DNEL:**  
n-butyl acetate (123-86-4)  
End Use: Workers  
Exposure routes: Inhalation  
Potential health effects: short term – systemic effects  
Value: 960 mg/m³
Sample Agent Alu Zinc Spray 17-09013

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<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use:</th>
<th>Exposure routes:</th>
<th>Potential health effects:</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>480 mg/m³</td>
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</tr>
<tr>
<td>DNEL:</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>480 mg/m³</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>859.7 mg/m³</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>DNEL:</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
<td>859.7 mg/m³</td>
</tr>
<tr>
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<tr>
<td>DNEL:</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>102.34 mg/m³</td>
</tr>
<tr>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>102.34 mg/m³</td>
</tr>
<tr>
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</tr>
<tr>
<td>DNEL:</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>zinc (7440-66-6)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>5 mg/m³</td>
</tr>
<tr>
<td></td>
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<tr>
<td>DNEL:</td>
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<td></td>
</tr>
<tr>
<td>zinc (7440-66-6)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>83 mg/kg</td>
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</tbody>
</table>
zinc (7440-66-6) End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 0.83 mg/kg

DNEL: zinc (7440-66-6) End Use: Consumers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 83 mg/kg

DNEL: Naphtha (petroleum), hydrotreated heavy (64742-48-9) End Use: Workers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 300 mg/kg

DNEL: Naphtha (petroleum), hydrotreated heavy (64742-48-9) End Use: Consumers
Exposure routes: Ingestion
Potential health effects: long term – systemic effects
Value: 300 mg/kg

DNEL: Naphtha (petroleum), hydrotreated heavy (64742-48-9) End Use: Consumers
Exposure routes: Skin contact
Potential health effects: long term – systemic effects
Value: 300 mg/kg

DNEL: Naphtha (petroleum), hydrotreated heavy (64742-48-9) End Use: Consumers
Exposure routes: Inhalation
Potential health effects: long term – systemic effects
Value: 900 mg/m3

DNEL: butan-1-ol (71-36-3) End Use: Workers
Exposure routes: Inhalation
Potential health effects: long term – local effects
Value: 310 mg/m3
<table>
<thead>
<tr>
<th>Substance</th>
<th>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>butan-1-ol (71-36-3)</td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>55 mg/m³</td>
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<tr>
<td>butan-1-ol (71-36-3)</td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>3.125 mg/kg</td>
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<tr>
<td>ethyl acetate (141-78-6)</td>
<td>Soil</td>
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<td>PNEC:</td>
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<td></td>
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<tr>
<td>ethyl acetate (141-78-6)</td>
<td>STP</td>
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<td>650 mg/l</td>
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<tr>
<td>acetone (67-64-1)</td>
<td>Soil</td>
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<td>29.5 mg/kg</td>
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<td>PNEC:</td>
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<td></td>
</tr>
<tr>
<td>acetone (67-64-1)</td>
<td>Fresh water</td>
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<td>10.6 mg/l</td>
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<td>PNEC:</td>
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<tr>
<td>acetone (67-64-1)</td>
<td>Fresh water sediment</td>
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<td>30.4 mg/kg</td>
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<td>PNEC:</td>
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<tr>
<td>acetone (67-64-1)</td>
<td>Marine water</td>
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<td>1.06 mg/l</td>
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<td>PNEC:</td>
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</tr>
<tr>
<td>acetone (67-64-1)</td>
<td>Marine sediment</td>
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<td>3.04 mg/kg</td>
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<tr>
<td>PNEC:</td>
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<tr>
<td>xylene (1330-20-7)</td>
<td>Soil</td>
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<td>2.31 mg/kg</td>
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<td>PNEC:</td>
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<td></td>
</tr>
<tr>
<td>xylene (1330-20-7)</td>
<td>Fresh water</td>
<td></td>
<td></td>
<td>0.327 mg/l</td>
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</table>
## Sample Agent Alu Zinc Spray 17-09013

<table>
<thead>
<tr>
<th>Substance</th>
<th>Environment</th>
<th>Value</th>
<th>PNEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>xylene (1330-20-7)</td>
<td>Fresh water sediment</td>
<td>12.46 mg/kg</td>
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<tr>
<td>xylene (1330-20-7)</td>
<td>Marine water</td>
<td>0.327 mg/l</td>
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</tr>
<tr>
<td>xylene (1330-20-7)</td>
<td>Marine sediment</td>
<td>12.46 mg/kg</td>
<td></td>
</tr>
<tr>
<td>xylene (1330-20-7)</td>
<td>STP</td>
<td>6.58 mg/l</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Soil</td>
<td>0.0903 mg/kg</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Fresh water</td>
<td>0.18 mg/l</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Fresh water sediment</td>
<td>0.981 mg/kg</td>
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<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>STP</td>
<td>35.6 mg/l</td>
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</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Marine water</td>
<td>0.018 mg/l</td>
<td></td>
</tr>
<tr>
<td>n-butyl acetate (123-86-4)</td>
<td>Marine sediment</td>
<td>0.0981 mg/kg</td>
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</tr>
<tr>
<td>zinc (7440-66-6)</td>
<td>Fresh water</td>
<td>0.0206 mg/l</td>
<td></td>
</tr>
<tr>
<td>zinc (7440-66-6)</td>
<td>Fresh water sediment</td>
<td>117.8 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>
8.2 Exposure controls

Personal protective equipment
Eye protection : Eye wash bottle with pure water
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Wear face-shield and protective suit for abnormal processing problems.

Hand protection
Material : Solvent-resistant gloves (butyl-rubber)
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

: Take note of the information given by the producer concerning 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
In the case of vapour formation use a respirator with an approved filter.

: Use suitable breathing protection if workplace concentration requires.

Environmental exposure controls
General advice : 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
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>
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</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
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<tr>
<td>Colour</td>
<td>no data available</td>
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<tr>
<td>Odour</td>
<td>characteristic</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>
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<tr>
<td>Bulk density</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>
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<tr>
<td>Density</td>
<td>0.96 g/cm3</td>
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<tr>
<td>Water solubility</td>
<td>no data available</td>
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<tr>
<td>Solubility in other solvents</td>
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</tr>
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<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
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<tr>
<td>Thermal decomposition</td>
<td>no data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
</tbody>
</table>
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: Stable under recommended storage conditions.
Vapours may form explosive mixture with air.

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

10.5 Incompatible materials
Materials to avoid: no data available

10.6 Hazardous decomposition products

Other information: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity
Product
Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

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

Acute inhalation toxicity: Acute toxicity estimate: > 40 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

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

Acute dermal toxicity: Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

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

7429-90-5 :
Acute inhalation toxicity : LC50 rat: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

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

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

91-20-3 :
Acute oral toxicity : Acute toxicity estimate : 500 mg/kg
Method: Converted acute toxicity point estimate

Skin corrosion/irritation

**Product**
May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation

**Product**
May cause irreversible eye damage.
Respiratory or skin sensitisation  
no data available

Carcinogenicity  
no data available

Toxicity to reproduction/fertility  
no data available

Reprod.Tox./Development/Teratogenicity  
no data available

STOT - single exposure  
no data available

STOT - repeated exposure  
no data available

Aspiration toxicity  
no data available

Further information

Product
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
12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
no data available

12.6 Other adverse effects

**Product:**

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

---

**SECTION 13: Disposal considerations**

**European Waste Catalogue** : 16 05 04 - gases in pressure containers (including halons) containing 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.

**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.
SECTION 14: Transport information

14.1 UN number
- ADR: 1263
- IMDG: 1263
- IATA: 1263

14.2 Proper shipping name
- ADR: PAINT
- IMDG: PAINT
- IATA: PAINT

14.3 Transport hazard class
- ADR: 3
- IMDG: 3
- IATA: 3

14.4 Packing group
- ADR
  - Packaging group: II
  - Classification Code: F1
  - Hazard identification No: 33
  - Labels: 3
  - Tunnel restriction code: (D/E)
- IMDG
  - Packaging group: II
  - Labels: 3
  - EmS Number: F-E, S-E
- IATA
  - Packing instruction (cargo aircraft): 364
  - Packing instruction (passenger aircraft): 353
  - Packing instruction (LQ): Y341
  - Packaging group: II
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Labels : 3

14.5 Environmental hazards

IMDG : Marine pollutant

ADR : Environmentally hazardous

14.6 Special precautions for user

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

SECTION 15: Regulatory information

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

Water contaminating class : WGK 2 water endangering
(Germany)

15.2 Chemical Safety Assessment

no data available

SECTION 16: Other information

Full text of R-Phrases

R10 Flammable.
R11 Highly flammable.
R20/21 Harmful by inhalation and in contact with skin.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R37/38 Irritating to respiratory system and skin.
R38 Irritating to skin.
R40 Limited evidence of a carcinogenic effect.
R41 Risk of serious damage to eyes.
R50 Very toxic to aquatic organisms.
R53 May cause long-term adverse effects in the aquatic environment.

Full text of H-Statements
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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.
H315  Causes skin irritation.
H318  Causes serious eye damage.
H319  Causes serious eye irritation.
H322  Harmful if inhaled.
H335  May cause respiratory irritation.
H336  May cause drowsiness or dizziness.
H351  Suspected of causing cancer.
H400  Very toxic to aquatic life.
H410  Very toxic to aquatic life with long lasting effects.

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.