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

ULTRASTAR FX-1604 Silver

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

1.1 Product identifier
Trade name : ULTRASTAR FX-1604 Silver
Material number : 052297QQ0

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 of person responsible for the SDS : msds.eckart@altana.com

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.
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.

Classification (67/548/EEC, 1999/45/EC)
Highly flammable
R11: Highly flammable.
Irritant
R36: Irritating to eyes.
2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

- **Signal word**: Danger
- **Hazard pictograms**: ![Flammable](image.png) ![Warning](image.png)
- **Hazard statements**:
  - H225: Highly flammable liquid and vapour.
  - H319: Causes serious eye irritation.
  - H336: May cause drowsiness or dizziness.
- **Supplemental Hazard Statements**: EUH066: Repeated exposure may cause skin dryness or cracking.

### 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.

- **Response**: P303 + P361 + P353: IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
  - P312: Call a POISON CENTER/doctor if you feel unwell.
  - 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:

- 107-98-2: 1-methoxy-2-propanol
- 141-78-6: ethyl acetate
- 67-64-1: acetone
- 67-63-0: isopropanol
- 67-63-0: propan-2-ol

### 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>Chemical name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
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</thead>
<tbody>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td></td>
<td>F; R11</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319</td>
<td>&gt;= 25 - &lt; 50</td>
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<td>ethyl acetate</td>
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<td>205-500-4</td>
<td>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;= 10 - &lt; 20</td>
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<tr>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>231-072-3</td>
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<td>F; R11</td>
<td>Flam. Sol. 1; H228</td>
<td>&gt;= 1 - &lt; 10</td>
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<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>200-662-2</td>
<td></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;= 3 - &lt; 10</td>
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<tr>
<td>cellulose nitrate</td>
<td>9004-70-0</td>
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<td></td>
<td>F; R11</td>
<td>Flam. Sol. 2; H228</td>
<td>&gt;= 1 - &lt; 10</td>
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<tr>
<td>isopropanol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td>01-2119457558-25</td>
<td>F; R11 Xi; R36 R67</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 1 - &lt; 3</td>
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<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>200-578-6</td>
<td>01-2119457610-43</td>
<td>F; R11</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319</td>
<td>&gt;= 1 - &lt; 3</td>
</tr>
<tr>
<td>propan-2-ol</td>
<td>67-63-0</td>
<td>200-661-7</td>
<td></td>
<td>F; R11 Xi; R36 R67</td>
<td>Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336</td>
<td>&gt;= 1 - &lt; 3</td>
</tr>
</tbody>
</table>

Substances with a workplace exposure limit:

- 1-methoxy-2-propanol

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.

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 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.

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: Wear self-contained breathing apparatus for firefighting if
for firefighters 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 material 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. 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

**Occupational Exposure Limits**
Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis (Version Date) |
---|---|---|---|---|
ethanol | 64-17-5 | TWA | 1,000 ppm 1,920 mg/m³ | GB EH40 (2005-04-06) |
Further information | | | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used |
ethanol | 64-17-5 | TWA | 1,000 ppm 1,920 mg/m³ | GB EH40 (2005-04-06) |
Further information | | | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used |
1-methoxy-2-propanol | 107-98-2 | STEL | 150 ppm 568 mg/m³ | 2000/39/EC (2000-06-16) |
Further information | | | Identifies the possibility of significant uptake through the skin, Indicative |
1-methoxy-2-propanol | 107-98-2 | TWA | 100 ppm 375 mg/m³ | 2000/39/EC (2000-06-16) |
Further information | | | Identifies the possibility of significant uptake through the skin, Indicative |
1-methoxy-2-propanol | 107-98-2 | TWA | 100 ppm 375 mg/m³ | GB EH40 (2005-04-06) |
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. |
1-methoxy-2-propanol | 107-98-2 | STEL | 150 ppm 560 mg/m³ | GB EH40 (2005-04-06) |
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. |
ethyl acetate | 141-78-6 | TWA | 200 ppm | GB EH40 (2005-04-06) |
ethyl acetate | 141-78-6 | STEL | 400 ppm | GB EH40 (2005-04-06) |
aluminium powder (stabilised) | 7429-90-5 | TWA (Inhalable) | 10 mg/m³ | GB EH40 (2011-12-01) |
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 |
aluminium powder (stabilised) | 7429-90-5 | TWA (Respirable) | 4 mg/m³ | GB EH40 (2011-12-01) |
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 |
aluminium powder (stabilised) | 7429-90-5 | TWA (Inhalable) | 10 mg/m³ | GB EH40 (2005-04-06) |
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>aluminium powder (stabilised)</th>
<th>7429-90-5</th>
<th>TWA (Respirable)</th>
<th>4 mg/m(^3)</th>
<th>GB EH40 (2005-04-06)</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>aluminium powder (stabilised)</td>
<td>7429-90-5</td>
<td>TWA (inhalable dust)</td>
<td>10 mg/m(^3)</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 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>aluminium powder (stabilised)</th>
<th>7429-90-5</th>
<th>TWA (Respirable dust)</th>
<th>4 mg/m(^{3})</th>
<th>GB EH40 (2011-12-01)</th>
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</thead>
<tbody>
<tr>
<td>Further information</td>
<td>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.</td>
<td></td>
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<tr>
<td>acetone</td>
<td>67-64-1</td>
<td>TWA</td>
<td>500 ppm</td>
<td>GB EH40 (2000-03-29)</td>
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<td></td>
<td></td>
<td>1,210 mg/m(^{3})</td>
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<td>acetone</td>
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<td>TWA</td>
<td>1,000 ppm</td>
<td>GB EH40 (2005-09-01)</td>
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<td>STEL</td>
<td>1,500 ppm</td>
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<td>STEL</td>
<td>500 ppm</td>
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</tr>
<tr>
<td>ethanol</td>
<td>64-17-5</td>
<td>TWA</td>
<td>1,000 ppm</td>
<td>GB EH40 (2005-09-01)</td>
</tr>
</tbody>
</table>
Further information
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>End Use</th>
<th>Exposure routes</th>
<th>Potential health effects</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethanol (64-17-5)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>343 mg/kg</td>
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<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>950 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>950 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>87 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>206 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>114 mg/m³</td>
</tr>
<tr>
<td>1-methoxypropan-2-ol (107-98-2)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>553.5 mg/m³</td>
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<tr>
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<td>Workers</td>
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<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>369 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
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<tr>
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<tr>
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<td>Consumers</td>
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<td>long term – systemic effects</td>
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<tr>
<td>ethyl acetate (141-78-6)</td>
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</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
<td>1468 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>734 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>63 mg/kg</td>
</tr>
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<td></td>
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<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>734 mg/m³</td>
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<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>734 mg/m³</td>
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<tr>
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<td>Consumers</td>
<td>Inhalation</td>
<td>short term – systemic effects</td>
<td>734 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – local effects</td>
<td>367 mg/m³</td>
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<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>37 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>367 mg/m³</td>
</tr>
<tr>
<td>acetone (67-64-1)</td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>4.5 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>186 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>1210 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>62 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>200 mg/m³</td>
</tr>
<tr>
<td>propan-2-ol (67-63-0)</td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>888 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>500 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Ingestion</td>
<td>long term – systemic effects</td>
<td>26 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>319 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>89 mg/m³</td>
</tr>
<tr>
<td>ethanol (64-17-5)</td>
<td>Workers</td>
<td>Inhalation</td>
<td>short term – local effects</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Skin contact</td>
<td>long term – systemic effects</td>
<td>343 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Workers</td>
<td>Inhalation</td>
<td>long term – systemic effects</td>
<td>950 mg/m³</td>
</tr>
<tr>
<td></td>
<td>Consumers</td>
<td>Inhalation</td>
<td>short term – local</td>
<td>950 mg/m³</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>ethanol (64-17-5)</td>
<td>Soil</td>
<td>0.63 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0.96 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>3.6 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.79 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>2.9 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>580 mg/l</td>
</tr>
<tr>
<td>1-methoxypropan-2-ol (107-98-2)</td>
<td>Fresh water</td>
<td>10 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>1 mg/l</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>100 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>52.3 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>5.2 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Soil</td>
<td>4.59 mg/kg</td>
</tr>
<tr>
<td>ethyl acetate (141-78-6)</td>
<td>Soil</td>
<td>0.148 mg/kg</td>
</tr>
<tr>
<td></td>
<td>STP</td>
<td>650 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water</td>
<td>0.24 mg/l</td>
</tr>
<tr>
<td></td>
<td>Marine water</td>
<td>0.024 mg/l</td>
</tr>
<tr>
<td></td>
<td>Fresh water sediment</td>
<td>1.15 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Marine sediment</td>
<td>0.115 mg/kg</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

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<table>
<thead>
<tr>
<th>8.2 Exposure controls</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal protective equipment</strong></td>
</tr>
<tr>
<td><strong>Eye protection</strong> : Eye wash bottle with pure water Wear face-shield and protective suit for abnormal processing problems. \ Goggles</td>
</tr>
<tr>
<td><strong>Hand protection</strong> Material : Solvent-resistant gloves (butyl-rubber)</td>
</tr>
<tr>
<td><strong>Remarks</strong> : 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</td>
</tr>
</tbody>
</table>
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
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>silver</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>76 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>-4 °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>No data available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
</tbody>
</table>
ULTRASTAR FX-1604 Silver

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

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 Components:
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64-17-5:
Acute oral toxicity  :  LD50 (Mouse): 3,450 mg/kg
                    :  LD50 (Rat): 7,060 mg/kg
                    :  LD50 (Rabbit): 6,300 mg/kg
Acute inhalation toxicity  :  LC50 (Rat): 20,000 mg/l
                           :  Exposure time: 4 h
Acute dermal toxicity  :  LD50 (Rat): > 2,000 mg/kg

141-78-6:
Acute inhalation toxicity  :  LC50 (Rat): 56 mg/l
                            :  Exposure time: 4 h
Acute dermal toxicity  :  LD50 (Rabbit): > 18,000 mg/kg

67-63-0:
Acute oral toxicity  :  LD50 (Rat): > 2,000 mg/kg
Acute inhalation toxicity  :  LC50 (Rat): > 20 mg/l
                           :  Exposure time: 8 h
Acute dermal toxicity  :  LD50 (Rabbit): > 2,000 mg/kg

64-17-5:
Acute oral toxicity  :  LD50 (Mouse): 3,450 mg/kg
                    :  LD50 (Rat): 7,060 mg/kg
                    :  LD50 (Rabbit): 6,300 mg/kg
Acute inhalation toxicity  :  LC50 (Rat): 20,000 mg/l
                           :  Exposure time: 4 h
Acute dermal toxicity  :  LD50 (Rat): > 2,000 mg/kg

107-98-2:
Acute oral toxicity  :  LD50 (Rat): 4,016 mg/kg
Acute inhalation toxicity  :  LC50 (Rat): > 25.8 mg/l
                           :  Exposure time: 6 h
                           :  Test atmosphere: vapour
Acute dermal toxicity  :  LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Product:
Remarks: May cause skin irritation in susceptible persons.
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### Serious eye damage/eye irritation

**Product:**

Remarks: May cause irreversible eye damage.

### 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**

No data available

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: No data available

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**SECTION 13: Disposal considerations**

**European Waste Catalogue** : 08 03 12 - waste ink containing dangerous substances

13.1 **Waste treatment methods**

**Product** : Do not dispose of waste into sewer. 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 : UN 1210
IMDG : UN 1210
IATA : UN 1210

14.2 UN proper shipping name
ADR : PRINTING INK
IMDG : PRINTING INK
IATA : Printing ink

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
Labels : 3
Tunnel restriction code : (D/E)

IMDG
Packing group : II
Labels : 3
EmS Number : F-E-S-D

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 : no

IMDG
Marine pollutant : no

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).
This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

15.2 Chemical safety assessment
This information is not available.

SECTION 16: Other information

Full text of R-Phrases
R10 : Flammable.
R11 : Highly flammable.
R36 : Irritating to eyes.
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.
H319 : Causes serious eye irritation.
H336 : May cause drowsiness or dizziness.

Full text of other abbreviations
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Flam. Sol. : Flammable solids
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 - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50% of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative |

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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