## SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product name

**Isolierlack rot**

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

Relevant identified uses

Paint.

Uses advised against

No information.

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

Supplier

WINKEL GmbH
Lisztstraße 1
53881 Euskirchen - Germany
Tel.: +49 2251 77 69 400-401
Fax: +49 2251 77 69 402
E-Mail: info@winkelgroup.de
Internet: www.winkelgroup.de

### 1.4. Emergency telephone number

Emergency

112

Supplier

+49 2251 77 69 400-401

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

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

Aerosol 1; H222 Extremely flammable aerosol.
Aerosol 1; H229 Pressurised container: May burst if heated.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H336 May cause drowsiness or dizziness.

### 2.2 Label elements

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

Signal word: **Danger**

H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.
P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE/doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P410 + P412 Protect from sunlight. Do no expose to temperatures exceeding 50 °C/122°F.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

#### 2.2.2. Contains:

acetone (CAS: 67-64-1, EC: 200-662-2, Index: 606-001-00-8)

#### 2.2.3. Special provisions

Special hazards are not known or expected.

### 2.3. Other hazards

Vapors can form an explosive mixture with air.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

For mixtures see 3.2.

### 3.2. Mixtures

| Name | CAS<br>EC<br>Index | % | Classification according to Regulation (EC) No 1272/2008 (CLP) | Specific Conc. Limits | REACH Registration No. |
|---|---|---|---|---|---|
| acetone | 67-64-1<br>200-662-2<br>606-001-00-8 | 25-50 | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336<br>EUH066 | | 01-2119471330-49 |
| isobutane *[C, U]* | 75-28-5<br>200-857-2<br>601-004-00-0 | 10-25 | Flam. Gas 1; H220<br>Press. Gas; H280 | | 01-2119485395-27 |
| dimethyl ether *[U]* | 115-10-6<br>204-065-8<br>603-019-00-8 | 10-25 | Flam. Gas 1; H220<br>Press. Gas; H280 | | 01-2119472128-37 |
| propane *[U]* | 74-98-6<br>200-827-9<br>601-003-00-5 | 2,5-10 | Flam. Gas 1; H220<br>Press. Gas; H280 | | 01-2119486944-21 |
| 2-methoxy-1-methylethyl acetate | 108-65-6<br>203-603-9<br>607-195-00-7 | 2,5-10 | Flam. Liq. 3; H226 | | 01-2119475791-29 |
| xylene *[C]* | 1330-20-7<br>215-535-7<br>601-022-00-9 | 2,5-<10 | Flam. Liq. 3; H226<br>Acute Tox. 4; H312<br>Skin Irrit. 2; H315<br>Acute Tox. 4; H332 | | - |
| propan-2-ol | 67-63-0<br>200-661-7<br>603-117-00-0 | 2,5-10 | Flam. Liq. 2; H225<br>Eye Irrit. 2; H319<br>STOT SE 3; H336 | | 01-2119457558-25 |
| butyl glycollate | 7397-62-8<br>230-991-7<br>- | <1 | Eye Dam. 1; H318<br>Repr. 2; H361 | | - |

Notes for substances:

| | |
|---|---|
| **C** | Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers.<br><br>In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers. |
| **U** | When put on the market gases have to be classified as 'Gases under pressure', in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned:<br>Press. Gas (Comp.)<br>Press. Gas (Liq.)<br>Press. Gas (Ref. Liq.)<br>Press. Gas (Diss.)<br>Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2). |

## SECTION 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

General notes

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency.
No action shall be taken involving any personal risk or without suitable training.

Following inhalation

If symptoms occur, seek medical advice. Remove patient to fresh air - move out of dangerous area. Keep at rest in a position comfortable for breathing. Obtain professional medical help! If breathing is irregular or respiratory arrest occurs provide artificial respiration. Seek medical help immediately. In case of unconsciousness bring patient into stable side position and seek medical attention.

Following skin contact

Take off all contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water and soap. If symptoms develop and persist, seek medical attention. Wash contaminated clothes and shoes before reuse.

Following eye contact

Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

Following ingestion

Not likely. Accidental ingestion: Do not induce vomiting without prior consultation with a doctor. In case of doubt or if feeling unwell seek medical help. Show the physician the safety data sheet or label.

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

Inhalation

Vapours may cause drowsiness and dizziness.
Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation.
Coughing, sneezing, nasal discharge, labored breathing.

Skin contact

Contact with skin may cause irritation (redness, itching).
Repeated exposure may cause dry skin or cracked skin.

Eye contact

Strongly irritates the eyes.
Redness, tearing, pain.

Ingestion

Ingestion is unlikely because it is an aerosol.
Accidental ingestion:
May cause abdominal discomfort.
May cause nausea/vomiting and diarrhea.
Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.

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

Treat symptomatically.

## SECTION 5. FIREFIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide ($CO_2$).
Fire extinguishing powder.
Alcohol-resistant foam.
Water spray. Extinguish large fires with water spray or alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Full water jet.

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

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke. In the event of fire the following can be generated: carbon monoxide (CO), carbon dioxide ($CO_2$).

### 5.3. Advice for firefighters

#### Protective actions

In case of fire evacuate the area. In case of fire or heating do not breathe fumes/vapours. Vapours can form explosive mixtures with air. In case of fire aerosols can explode and be propelled to considerable distances in different directions. Cool containers at risk with water spray. If possible remove containers from endangered area. No action shall be taken involving any personal risk or without suitable training.

#### Special protective equipment for firefighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

## SECTION 6. ACCIDENTAL RELEASE MEASURES

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

#### 6.1.1. For non-emergency personnel

**Protective equipment**

Use personal protective equipment (Section 8).

**Emergency procedures**

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking! No action shall be taken involving any personal risk or without suitable training. Prevent access to unauthorised personnel. Prevent access to unprotected personnel. Avoid contact with skin and eyes. Do not breathe vapour or mist.

#### 6.1.2. For emergency responders

Use personal protective equipment.

### 6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental large entry into water or ground occurs, inform responsible authorities.

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

#### 6.3.1. For containment

Stem the spill if this does not pose risks.

#### 6.3.2. For cleaning up

Collect the spray cans and hand them over to an authorized waste disposal contractor. Release of liquid because of damaged aerosol can (release of large quantities): In case of bigger spill, dam the spillage, pump the liquid into appropriate labelled containers, absorb a residue with absorbent material and dispose of according to local regulations. Do not absorb spillage with sawdust or other combustible material. Dispose in accordance with applicable regulations (see Section 13). Clean residue from spill site.

#### 6.3.3. Other information

-

### 6.4. Reference to other sections

See also Sections 8 and 13.

## SECTION 7. HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### 7.1.1. Protective measures

**Measures to prevent fire**

Ensure adequate ventilation. Take precautionary measures against static discharges. Keep away from sources of ignition - no smoking. Use spark-proof tools. Pressurized container; protect from sunlight and do not expose to tempratures exceeding 50°C. Do not pierce or burn, even after use. Do not spray on a naked flame or incandescent material.

**Measures to prevent aerosol and dust generation**

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

**Measures to protect the environment**

-

#### 7.1.2. Advice on general occupational hygiene

Consider measures required in Section 8 of this safety data sheet. Use personal protective equipment. Refer to instructions on label and regulations for safety and health at work. Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/mist.

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

#### 7.2.1. Technical measures and storage conditions

Store in accordance with local regulations. Keep in well closed containers. Keep in cool and well ventilated area. Protect from open fire, heat and direct sunlight. Keep away from sources of ignition. Keep away from oxidising substances. Keep away from food, drink and animal feeding stuffs.

#### 7.2.2. Packaging materials

The original container of producer.

#### 7.2.3. Requirements for storage rooms and vessels

Do not store in unlabelled containers.

#### 7.2.4. Storage class

-

#### 7.2.5. Further information on storage conditions

-

### 7.3. Specific end use(s)

**Recommendations**

-

**Industrial sector specific solutions**

-

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### 8.1.1. Occupational exposure limit values

| Name (CAS) | Limit values | | Short-term exposure limit | | Remarks | Biological Tolerance Values |
|---|---|---|---|---|---|---|
| | ml/m³ (ppm) | mg/m³ | ml/m³ (ppm) | mg/m³ | | |
| Propan-2-ol (67-63-0) | 400 | 999 | 500 | 1250 | | |
| Dimethyl ether (115-10-6) | 400 | 766 | 500 | 958 | | |
| Butyl acetate (123-86-4) | 150 | 724 | 200 | 966 | | |
| Acetone (67-64-1) | 500 | 1210 | 1500 | 3620 | | |
| 1-Methoxypropyl acetate (108-65-6) | 50 | 274 | 100 | 548 | Sk | |
| Xylene, o-,m-,p- or mixed isomers (1330-20-7) | 50 | 220 | 100 | 441 | Sk, BMGV | 650 mmol methyl hippuric acid/mol creatinine in urine - Post shift |

### 8.1.2. Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 482:2012+A1:2015 Workplace exposure. General requirements for the performance of procedures for the measurement of chemical agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values.

### 8.1.3. DNEL/DMEL values

**For components**

| Name | Type | Exposure route | Exposure frequency | Value | Remark |
|---|---|---|---|---|---|
| acetone (67-64-1) | Worker | dermal | long term (systemic effects) | 186 mg/kg bw/day | |
| acetone (67-64-1) | Worker | inhalation | short term (local effects) | 2420 mg/m³ | |
| acetone (67-64-1) | Worker | inhalation | long term (systemic effects) | 1210 mg/m³ | |
| acetone (67-64-1) | Consumer | oral | long term (systemic effects) | 62 mg/kg bw/day | |
| acetone (67-64-1) | Consumer | dermal | long term (systemic effects) | 62 mg/kg bw/day | |
| acetone (67-64-1) | Consumer | inhalation | long term (systemic effects) | 200 mg/m³ | |
| dimethyl ether (115-10-6) | Worker | inhalation | long term (systemic effects) | 1894 mg/m$^3$ | |
| dimethyl ether (115-10-6) | Consumer | inhalation | long term (systemic effects) | 471 mg/m$^3$ | |
| propan-2-ol (67-63-0) | Worker | inhalation | long term (systemic effects) | 500 mg/m$^3$ | |
| propan-2-ol (67-63-0) | Worker | dermal | long term (systemic effects) | 888 mg/kg bw/day | |
| propan-2-ol (67-63-0) | Consumer | inhalation | long term (systemic effects) | 89 mg/m$^3$ | |
| propan-2-ol (67-63-0) | Consumer | dermal | long term (systemic effects) | 319 mg/kg bw/day | |
| propan-2-ol (67-63-0) | Consumer | oral | long term (systemic effects) | 26 mg/kg bw/day | |

#### 8.1.4. PNEC values

**For components**

| Name | Exposure route | Value | Remark |
|---|---|---|---|
| acetone (67-64-1) | marine water | 1,06 mg/L | |
| acetone (67-64-1) | fresh water | 10,6 mg/L | |
| acetone (67-64-1) | fresh water sediment | 30,4 mg/kg | dry weight |
| acetone (67-64-1) | marine water sediment | 3,04 mg/kg | dry weight |
| acetone (67-64-1) | soil | 29,5 mg/kg | dry weight |
| acetone (67-64-1) | water treatment plant | 100 mg/L | |
| acetone (67-64-1) | water, intermittent release | 21 mg/L | fresh water |
| dimethyl ether (115-10-6) | fresh water | 0,155 mg/L | |
| dimethyl ether (115-10-6) | water, intermittent release | 1,549 mg/L | fresh water |
| dimethyl ether (115-10-6) | marine water | 0,016 mg/L | |
| dimethyl ether (115-10-6) | water treatment plant | 160 mg/L | |
| dimethyl ether (115-10-6) | fresh water sediment | 0,681 mg/kg | dry weight |
| dimethyl ether (115-10-6) | marine water sediment | 0,069 mg/kg | dry weight |
| dimethyl ether (115-10-6) | soil | 0,045 mg/kg | dry weight |
| propan-2-ol (67-63-0) | fresh water | 140,9 mg/L | |
| propan-2-ol (67-63-0) | water, intermittent release | 140,9 mg/L | fresh water |
| propan-2-ol (67-63-0) | marine water | 140,9 mg/L | |
| propan-2-ol (67-63-0) | water treatment plant | 2251 mg/L | |
| propan-2-ol (67-63-0) | fresh water sediment | 552 mg/kg | dry weight |
| propan-2-ol (67-63-0) | marine water sediment | 552 mg/kg | dry weight |
| propan-2-ol (67-63-0) | soil | 28 mg/kg | dry weight |
| propan-2-ol (67-63-0) | food chain | 160 mg/kg feed | oral |

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering control

**Substance/mixture related measures to prevent exposure during identified uses**

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin, eyes and clothes. Do not breathe vapours/aerosols. Keep away from foodstuffs, beverages and feed. Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation.

**Organisational measures to prevent exposure**

If this product contains ingredients with exposure limits, personal, workplace atmosphere monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protection.

**Technical measures to prevent exposure**

Provide good ventilation and local exhaust in areas with increased concentration.

#### 8.2.2. Personal protective equipment

**Eye and face protection**

Safety glasses with side protection (EN 166).

**Hand protection**

In case of prolonged exposure, wear protective gloves (EN 374).

**Skin protection**

Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345).

**Respiratory protection**

In case of insufficient ventilation wear suitable respiratory protection. If the concentration limit values are exceeded, it is necessary to wear appropriate respiratory protection. Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387).

**Thermal hazards**

-

8.2.3. Environmental exposure controls

-

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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

| | | |
|---|---|---|
| - | **Physical state:** | liquid; aerosol |
| - | **Colour:** | according to specification |
| - | **Odour:** | characteristic |

Important health, safety and environmental information

| | | |
|---|---|---|
| - | **pH** | No information. |
| - | **Melting point/freezing point** | No information. |
| - | **Initial boiling point/boiling range** | No information. |
| - | **Flash point** | No information. |
| - | **Evaporation rate** | No information. |
| - | **Flammability (solid, gas)** | No information. |
| - | **Explosion limits (vol%)** | 3,3 – 26,2 vol % (dimethylether)<br>2,1 – 13 vol % (acetone)<br>1,5 – 10,9 vol % (isobutane / propane) |
| - | **Vapour pressure** | 3,37 hPa at 20 °C |
| - | **Vapour density** | No information. |
| - | **Density** | **Density**:<br>0,895 – 0,956 kg/L at 20 °C (data refers to the liquid portion of the product) |
| - | **Solubility** | No information. |
| - | **Partition coefficient** | No information. |
| - | **Auto-ignition temperature** | No information. |
| - | **Decomposition temperature** | No information. |
| - | **Viscosity** | No information. |
| - | **Explosive properties** | No information. |
| - | **Oxidising properties** | No information. |

### 9.2. Other information

| | | |
|---|---|---|
| - | **Weight organic solvents** | 634 – 677 g/l (VOC)<br>84 – 90 % (VOC) |
| - | **Remarks:** | |

## SECTION 10. STABILITY AND REACTIVITY

### 10.1. Reactivity

Stable under recommended transport or storage conditions.

### 10.2. Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

### 10.3. Possibility of hazardous reactions

The product is stable under recommended storage and handling conditions.

### 10.4. Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not expose to heat and direct sunlight.

### 10.5. Incompatible materials

Strong reducing agents.
Oxidants. Halogenated compounds. Alkali metal. Ethanolamine. Attacks many plastics and rubbers.
Peroxide.

### 10.6. Hazardous decomposition products

In case of fire/explosion vapours/gases that pose a health hazard are released.

## SECTION 11. TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

(a) Acute toxicity

| Name | Exposure route | Type | Species | Time | Value | Method | Remark |
|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | inhalation | $LC_{50}$ | rat | 4 h | 76 mg/l | | |
| acetone (67-64-1) | dermal | $LD_{50}$ | rabbit | | > 15800 mg/kg | | |
| acetone (67-64-1) | oral | $LD_{50}$ | rat | | 5800 mg/kg | OECD 401 | |
| dimethyl ether (115-10-6) | Inhalation (gases) | $LC_{50}$ | rat | 4 h | 309 mg/l | | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | oral | $LD_{50}$ | rat | | > 5000 mg/kg | | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | inhalation (vapours) | $LC_{0}$ | rat | 6 h | > 4345 ppm | | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | dermal | $LD_{50}$ | rat | | > 2000 mg/kg | | |
| xylene (1330-20-7) | oral | $LD_{50}$ | rat | | 4300 mg/kg | | |
| xylene (1330-20-7) | dermal | $LD_{50}$ | rabbit | | 2000 mg/kg | | |
| xylene (1330-20-7) | inhalation | $LC_{50}$ | rat | 4 h | 21,7 mg/l | | |
| propan-2-ol (67-63-0) | oral | $LD_{50}$ | rat | | 5045 mg/kg | | |
| propan-2-ol (67-63-0) | dermal | $LD_{50}$ | rabbit | | 12800 mg/kg | | |
| propan-2-ol (67-63-0) | inhalation | $LC_{50}$ | rat | 4 h | 30 mg/l | | |
| butyl glycollate (7397-62-8) | oral | $LD_{50}$ | rat | | 4595 mg/kg | | |

**Additional information:** The product is not classified for acute toxicity.

(b) Skin corrosion/irritation

| Name | Species | Time | Result | Method | Remark |
|---|---|---|---|---|---|
| acetone (67-64-1) | guinea pig | | Non-irritant. | | |
| dimethyl ether (115-10-6) | | | May cause frostbite. | | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | | | May cause skin irritation. | | |

**Additional information:** The product is not classified as irritating to the skin.

(c) Serious eye damage/irritation

| Name | Species | Time | Result | Method | Remark |
|---|---|---|---|---|---|
| acetone (67-64-1) | rabbit | | Irritating to eyes. | OECD 405 | |
| acetone (67-64-1) | rabbit | | Irritates the eyes. The occurrence of corneal injuries is possible. | OECD 405 | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | | | May cause eye irritation. | | |
| **Additional information:** Causes serious eye irritation. | | | | | |

(d) Respiratory or skin sensitisation

| Name | Exposure route | Species | Time | Result | Method | Remark |
|---|---|---|---|---|---|---|
| acetone (67-64-1) | - | guinea pig | | Non sensitising. | OECD 406 | |
| 2-methoxy-1-methylethyl acetate (108-65-6) | - | guinea pig | | Non sensitising. | Maximisation test | |
| **Additional information:** The product is not classified as sensitising. | | | | | | |

(e) (Germ cell) mutagenicity

| Name | Type | Species | Time | Result | Method | Remark |
|---|---|---|---|---|---|---|
| acetone (67-64-1) | | Bacteria | | The tests did not show mutagenic effects | | |
| acetone (67-64-1) | | Cell: Mammalian-Animal | | The tests did not show mutagenic effects | | |
| acetone (67-64-1) | in-vitro mutagenicity | | | Negative. | OECD 473 | Chromosome aberration assay |
| acetone (67-64-1) | in-vitro mutagenicity | Cell: Mammalian-Animal | | Negative. | OECD 476 | |
| acetone (67-64-1) | in-vitro mutagenicity | Bacteria | | Negative. | OECD 471 | |
| acetone (67-64-1) | in-vivo mutagenicity | mouse | | Negative. | The micronucleus test | |
| dimethyl ether (115-10-6) | | | | The chemical is not classified as mutagenic. | | |
| dimethyl ether (115-10-6) | in-vitro mutagenicity | | | Negative. | OECD 471 | Ames test |
| dimethyl ether (115-10-6) | in-vitro mutagenicity | Human (lymphocytes) | | Negative. | cytogenetic test | OECD 473 |
| dimethyl ether (115-10-6) | in-vivo mutagenicity | *Drosophila melanogaster* | | Negative. | OECD 477 | |

(f) Carcinogenicity

| Name | Exposure route | Type | Species | Time | Value | Result | Method | Remark |
|---|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | | | | | | Animal testing did not show any carcinogenic effects. | | |
| acetone (67-64-1) | dermal | | mouse | | | negative | | |
| dimethyl ether (115-10-6) | | | | | | Substance is not classified as carcinogenic. | | |

(g) Reproductive toxicity

| Name | Reproductive toxicity type | Type | Species | Time | Value | Result | Method | Remark |
|---|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | Reproductive toxicity | | | | | Animal testing did not show any effects on fertility. | | |
| acetone (67-64-1) | Teratogenicity | | rat | | | Negative. | OECD 414 | |
| dimethyl ether (115-10-6) | Reproductive toxicity | inhalation | rat | | 47 mg/L | Animal testing did not show any effects on fertility. | OECD 452 | |
| dimethyl ether (115-10-6) | Maternal toxicity | NOAEL | rat | | 5000 ppm | | | Inhalation |
| dimethyl ether (115-10-6) | Teratogenicity | NOAEL | rat | | 40000 ppm | | | Inhalation |
| dimethyl ether (115-10-6) | Developmental toxicity | NOAEL | rat | | 40000 ppm | | | Inhalation |
| dimethyl ether (115-10-6) | - | NOAEL | rat | | 20000 ppm | | OECD 414 | inhalation (vapor), embryo-fetal development |

Summary of evaluation of the CMR properties

The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure

| Name | Exposure route | Type | Species | Time | Organ | Value | Result | Method | Remark |
|---|---|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | - | - | | | | | May cause drowsiness or dizziness. | | |
| **Additional information:** May cause drowsiness or dizziness. | | | | | | | | | |

(i) STOT-repeated exposure

| Name | Exposure route | Type | Species | Time | Organ | Value | Result | Method | Remark |
|---|---|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | dermal | - | | | | | Repeated exposure may cause dry and cracked skin. | | |
| acetone (67-64-1) | Repeated dose toxicity | NOAEL | rat | 90 days | oral | 900 mg/kg bw/day | | | |
| acetone (67-64-1) | Repeated dose toxicity | NOAEC | rat | | | 22500 $mg/m^3$ | | | inhalation |
| acetone (67-64-1) | inhalation | - | human | | | | Headache, dizziness, fatigue, nausea and vomiting. | | excessive exposure to vapors |
| acetone (67-64-1) | dermal | - | human | | | | Repeated or prolonged exposure may cause dermatitis. | | |
| acetone (67-64-1) | inhalation | - | human | | Nasal inner lining | | Symptoms: inflammation of the mucous membranes. | | |
| dimethyl ether (115-10-6) | Repeated dose toxicity | NOEL | rat | 2 years | | 47 mg/L | | OECD 452 | inhalation |
| **Additional information:** STOT RE (repeated exposure): Not classified. Repeated exposure may cause skin dryness or cracking. | | | | | | | | | |

(j) Aspiration hazard

| Name | Result | Method | Remark |
|---|---|---|---|
| dimethyl ether (115-10-6) | Aspiration hazard: Not Classified. | | |
| **Additional information:** Aspiration hazard: Not classified. | | | |

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### 12.1.1. Acute (short-term) toxicity

**For components**

| Substance (CAS Nr.) | Type | Value | Exposure time | Species | Organism | Method | Remark |
|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | $LC_{50}$ | 5540 mg/L | 96 h | fish | *Oncorhynchus mykiss* | | |
| | $LC_{50}$ | 11000 mg/L | 96 h | fish | *Alburnus alburnus* | | |
| | $LC_{50}$ | 8800 mg/L | 48 h | crustacea | *Daphnia magna* | | |
| | NOEC | 430 mg/L | 96 h | algae | | | |
| | - | 1000 mg/L | 30 min | bacteria | Activated sludge | OECD 209 | |
| dimethyl ether (115-10-6) | $LC_{50}$ | > 4,1 mg/L | 96 h | fish | *Poecilia reticulata* | | Semi-Static system |
| | $EC_{50}$ | > 4,4 mg/L | 48 h | crustacea | *Daphnia magna* | | static test |
| | $EC_{50}$ | 755,5 mg/L | 48 h | *Daphnia* | | ECOSAR | |
| | $EC_{50}$ | 154,9 mg/L | 96 h | algae | | ECOSAR | |
| | $EC_{10}$ | > 1600 mg/L | 17 h | bacteria | *Pseudomonas putida* | | static test |
| 2-methoxy-1-methylethyl acetate (108-65-6) | $LC_{50}$ | 134 mg/L | 96 h | fish | *Oncorhynchus mykiss* | OECD 203 | |
| | $EC_{50}$ | > 500 mg/L | 48 h | crustacea | *Daphnia magna* | Directive 67/548/EEC, Annex V, C.2. | |
| | $EC_{50}$ | > 1000 mg/L | 72 h | algae | *Selenastrum capricornutum* | OECD 201 | |
| | $EC_{10}$ | > 1000 mg/L | 30 min | bacteria | Activated sludge | ISO 8192 | |
| xylene (1330-20-7) | $EC_{50}$ | 165 mg/L | 48 h | *Daphnia* | | | |

#### 12.1.2. Chronic (long-term) toxicity

**For components**

| Substance (CAS Nr.) | Type | Value | Exposure time | Species | Organism | Method | Remark |
|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | NOEC | 2212 mg/l | 28 days | crustacea | *Daphnia pulex* | | reproduction |
| 2-methoxy-1-methylethyl acetate (108-65-6) | NOEC | 47,5 mg/l | 14 days | fish | *Oryzias latipes* | OECD 204 | |
| | NOEC | ≥ 100 mg/l | 21 days | crustacea | *Daphnia magna* | OECD 202 | |

### 12.2. Persistence and degradability

#### 12.2.1. Abiotic degradation, physical- and photo-chemical elimination

**For components**

| Substance (CAS Nr.) | Environment | Type / Method | Half Time | Evaluation | Method | Remark |
|---|---|---|---|---|---|---|
| acetone (67-64-1) | water | | | Degraded by hydrolysis. | | |

#### 12.2.2. Biodegradation

**For components**

| Substance (CAS Nr.) | Type | Rate | Time | Evaluation | Method | Remark |
|---|---|---|---|---|---|---|
| acetone (67-64-1) | biodegradability | 91 % | 28 days | readily biodegradable | OECD 301 B | |
| acetone (67-64-1) | BOD | 1900 mg/g | 5 days | | | |
| acetone (67-64-1) | COD | 2100 mg/g | | | | |
| dimethyl ether (115-10-6) | aerobic | 5 % | 28 days | not readily biodegradable | OECD 301 D | activated sludge |
| 2-methoxy-1-methylethyl acetate (108-65-6) | BOD | 83 % | 28 days | readily biodegradable | OECD 301 F | |

### 12.3. Bioaccumulative potential

#### 12.3.1. Partition coefficient

**For components**

| Substance (CAS Nr.) | Media | Value | Temperature | pH | Concentration | Method |
|---|---|---|---|---|---|---|
| acetone (67-64-1) | Log Pow | -0,24 | | | | |

#### 12.3.2. Bioconcentration factor (BCF)

**For components**

| Substance (CAS Nr.) | species | Organism | Value | Duration | Evaluation | Method | Remark |
|---|---|---|---|---|---|---|---|
| acetone (67-64-1) | BCF | | < 10 | | | | |

### 12.4. Mobility in soil

#### 12.4.1. Known or predicted distribution to environmental compartments

No information.

#### 12.4.2. Surface tension

No information.

#### 12.4.3. Adsorption/Desorption

**For components**

| Substance (CAS Nr.) | Type | Criterion | Value | Evaluation | Method | Remark |
|---|---|---|---|---|---|---|
| dimethyl ether (115-10-6) | Soil | | | Moderate mobility in soil. | | |

### 12.5. Results of PBT and vPvB assessment

No evaluation.

### 12.6. Other adverse effects

No information.

### 12.7. Additional information

**For product**

Product is not classified as dangerous for environment.
Water hazard class 1 (self-assessment): slightly hazardous for water.
Handle in accordance with good working practices so that the product is not released into the environment.

**For components**

**Substance: acetone**

Does not bioaccumulate.
The substance is highly volatile.
This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Avoid release to the environment.

**Substance: dimethyl ether**

Bioaccumulation is not expected.
This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

**Substance: 2-methoxy-1-methylethyl acetate**

Bioaccumulation is not expected.
This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

## SECTION 13. DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

#### 13.1.1. Product / Packaging disposal

**Waste chemical**

Avoid release to the environment. Dispose of in accordance with applicable waste disposal regulation. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste. Product and container must be disposed of safely.

**Waste codes / waste designations according to LoW**

16 05 04* - gases in pressure containers (including halons) containing dangerous substances

**Packaging**

Uncleaned containers should not be perforated, cut or welded. Pressurized container. Do not pierce or burn, even after use. Dispose of in accordance with applicable waste disposal regulation. Deliver completely emptied containers to approved waste disposal authorities.

**Waste codes / waste designations according to LoW**

15 01 11* - metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers

#### 13.1.2. Waste treatment-relevant information

-

#### 13.1.3. Sewage disposal-relevant information

-

#### 13.1.4. Other disposal recommendations

-

## SECTION 14. TRANSPORT INFORMATION

### 14.1. UN number

UN 1950

### 14.2. UN proper shipping name

AEROSOLS


### 14.3. Transport hazard class(es)

2.1

### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

NO.

### 14.6. Special precautions for user

**IATA**:
PCA Excepted quantities: E0
PCA Limited quantities: Y203
PCA limited quantity max net quantity: 30kgG
PCA packing instructions: 203
PCA max net quantity: 75kg
CAO packing instructions: 203
CAO max net quantity: 150kg
Special provisions: A145, A167, A802
ERG code: 10L

**Limited quantities**

1 L

**Tunnel restriction code**

(D)

**IMDG EmS**

F-D, S-U

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Goods may not be carried in bulk in bulk containers, containers or vehicles.

## SECTION 15. REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2015/830)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

#### 15.1.1. Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

Not applicable.

### 15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

## SECTION 16. OTHER INFORMATION

#### Indication of changes

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#### Abbreviations and acronyms

ATE - Acute Toxicity Estimate

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient
$LC_{50}$ - Lethal Concentration to 50 % of a test population
$LD_{50}$ - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum

SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

## Key literature references and sources for data

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## List of relevant H phrases

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H361 Suspected of damaging fertility or the unborn child .
EUH066 Repeated exposure may cause skin dryness or cracking.

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under Section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.