# ISOBUTANOL

**Version: *10*.00** **Revision Date 2017/03/23**

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

### 1.1 Product identifier

| | |
|---|---|
| **Trade name** | **Isobutanol** |
| **REACH No.** | 01-2119484609-23-0001 |
| **Substance name (REACH / CLP)** | 2-methylpropan-1-ol |

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

| | |
|---|---|
| **Use** | Industrial use<br>raw material for synthesis processes in the chemical industry<br>Solvent<br>raw material for fragrances |
| **Uses advised against** | |

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

| | |
|---|---|
| **Company** | Sasol Chemie GmbH & Co. KG<br>Anckelmannsplatz 1<br>20537 Hamburg<br>Germany<br><br>Telephone: +49 40 63684-1000<br>Telefax: +49 40 63684-3700 |
| **Information (Product safety):** | Telephone: + 49 (0) 23 65 - 49 47 05<br>Telefax: + 49 (0) 23 65 - 49 92 40 |
| **E-mail address** | solvents.germany.msds@de.sasol.com |

### 1.4 Emergency telephone number

| | |
|---|---|
| **Emergency telephone number** | +44 (0)1235 239 670 (Europe, Israel, Africa, Americas)<br>+44 (0)1235 239 671 (Middle East, Arabic African countries)<br>+65 3158 1074 (Asia Pacific)<br>+86 10 5100 3039 (China)<br>+27 (0)17 610 4444 (South Africa)<br>+61 (2)8014 4558 (Australia) |

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

| | |
|---|---|
| Flammable liquids Category 3 | Flammable liquid and vapour. |
| Skin irritation Category 2 | Causes skin irritation. |
| Serious eye damage Category 1 | Causes serious eye damage. |
| Specific target organ toxicity - single exposure Category 3 ( Respiratory system) | May cause respiratory irritation. |
| ( Central nervous system) | May cause drowsiness or dizziness. |

### 2.2 Label elements

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

**Hazard pictograms**

**Signal word** Danger

**Hazard statements**

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |

**Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. No smoking. |
| P243 | Take precautionary measures against static discharge. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |

### 2.3 Other hazards

Vapours may form explosive mixture with air.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is a substance in the meaning of regulation (EC) 1907/2006.

**COMPONENTS TO BE NAMED IN ACCORDANCE WITH REGULATION (EC) 1907/2006 AS WELL AS OTHER HAZARDOUS INGREDIENTS AND CONTAINED SUBSTANCES WITH WORK PLACE LIMIT VALUES**

**2-methylpropan-1-ol; iso-butanol**

**content:** <= 100 % **component type:** Active ingredient

**EC-No.:** 201-148-0 **Index-No.:** 603-108-00-1 **CAS-No.:** 78-83-1
**REACH No.**: 01-2119484609-23-0001
**Substance name (REACH / CLP):** 2-methylpropan-1-ol

| | | | |
|---|---|---|---|
| **Classification (Regulation (EC) No 1272/2008):** | Flam. Liq. | 3 | H226 |
| | Skin Irrit. | 2 | H315 |
| | Eye Dam. | 1 | H318 |
| | STOT SE | 3 | H335; H336 |

For the full text of the H-Statements mentioned in this Section, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

| | |
|---|---|
| **General advice** | Take off contaminated clothing and shoes immediately. |
| **If inhaled** | Bring the person into the fresh air and let rest undisturbed. |
| **In case of skin contact** | Wash off immediately with plenty of water. |
| **In case of eye contact** | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| **If swallowed** | Obtain medical attention. |

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

| | |
|---|---|
| **Most important symptoms and effects, both acute and delayed** | Risks: No information available. |

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

| | |
|---|---|
| **Indication of any immediate medical attention and special treatment needed** | Treatment: For specialist advice physicians should contact the Poisons Information Service. |

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

| | |
|---|---|
| **Suitable extinguishing media** | Alcohol-resistant foam, Dry powder, Water spray, Carbon dioxide (CO2) in enclosed spaces |

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

| | |
|---|---|
| **Specific hazards during firefighting** | When fighting fires in enclosed spaces: caution, danger of suffocation!<br>Flash back possible over considerable distance.<br>Vapours may form explosive mixtures with air. |

### 5.3 Advice for firefighters

| | |
|---|---|
| **Special protective equipment for firefighters** | Wear self-contained breathing apparatus and protective suit. |
| **Further information** | Cool containers/tanks with water spray. |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

| | |
|---|---|
| **Personal precautions** | Ensure adequate ventilation. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. |

### 6.2 Environmental precautions

| | |
|---|---|
| **Environmental precautions** | Do not flush into surface water or sanitary sewer system.<br>Do not allow material to contaminate ground water system. |

**6.3 Methods and materials for containment and cleaning up**

| | |
|---|---|
| **Methods for cleaning up** | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). The material taken up must be disposed of in accordance with regulations. |

**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** | Ensure adequate ventilation.<br>Vapours are heavier than air and may spread along floors.<br>Avoid formation of aerosol. |
| **Advice on protection against fire and explosion** | Do not allow to enter drains (danger of explosion).<br>Use only explosion-proof equipment.<br>Take precautionary measures against static discharges.<br>Vapours may form explosive mixtures with air.<br>Keep away from sources of ignition - No smoking. |
| **Temperature class** | T1 |
| **Fire-fighting class** | B: Fires involving liquids or liquid containing substances. Also includes substances which become liquid at elevated temperatures. |

**7.2 Conditions for safe storage, including any incompatibilities**

| | |
|---|---|
| **Requirements for storage areas and containers** | Keep tightly closed in a dry, cool and well-ventilated place. |
| **Storage class (TRGS 510)** | 3: Flammable Liquids |

**7.3 Specific end use(s)**

| | |
|---|---|
| **Specific use(s)** | Consult the technical guidelines for the use of this substance/mixture. |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

**COMPONENTS WITH WORKPLACE CONTROL PARAMETERS**

**National occupational exposure limits**

| Control parameters / Substance name | Typ | Control parameters | Update | Basis |
|---|---|---|---|---|
| 2-METHYLPROPAN-1-OL | TWA<br>TWA | 154 mg/m3<br>50 ppm | 2007<br>2007 | EH40 WEL |
| 2-METHYLPROPAN-1-OL | STEL<br>STEL | 231 mg/m3<br>75 ppm | 2007<br>2007 | EH40 WEL |

**EUROPEAN OCCUPATIONAL EXPOSURE LIMITS**

No data available

**DERIVED NO EFFECT LEVEL (DNEL)**

| **Substance name: 2-methylpropan-1-ol** | | | |
|---|---|---|---|
| **End Use** | **Exposure routes** | **Value** | **Note** |
| Workers | dermal, Acute/short-term exposure - systemic effects | | Not relevant / not applicable |
| | Inhalation, Acute/short-term exposure - systemic effects | | Not relevant / not applicable |
| | dermal, Acute/short-term exposure - local effects | | Not relevant / not applicable |
| | Inhalation, Acute/short-term exposure - local effects | | Not relevant / not applicable |
| | dermal, long-term exposure - systemic effects | | Not relevant / not applicable |
| | Inhalation, long-term exposure - systemic effects | | Not relevant / not applicable |
| | dermal, long-term exposure - local effects | | Not relevant / not applicable |
| | Inhalation, long-term exposure - local effects | 310 mg/m3 | |
| Consumers | dermal, Acute/short-term exposure - systemic effects | | Not relevant / not applicable |
| | Inhalation, Acute/short-term exposure - systemic effects | | Not relevant / not applicable |
| | Oral, Acute/short-term exposure - systemic effects | | Not relevant / not applicable |
| | dermal, Acute/short-term exposure - local effects | | Not relevant / not applicable |
| | Inhalation, Acute/short-term exposure - local effects | | Not relevant / not applicable |
| | dermal, long-term exposure - systemic effects | | Not relevant / not applicable |
| | Inhalation, long-term exposure - systemic effects | | Not relevant / not applicable |
| | Oral, long-term exposure - systemic effects | | Not relevant / not applicable |
| | dermal, long-term exposure - local effects | | Not relevant / not applicable |
| | Inhalation, long-term exposure - local effects | 55 mg/m3 | |

**PREDICTED NO EFFECT CONCENTRATION (PNEC)**

| **Substance name: 2-methylpropan-1-ol** | | |
|---|---|---|
| **Environmental Compartment** | **Value** | **Note** |
| Fresh water | 0.4 mg/l | |
| Marine water | 0.04 mg/l | |
| intermittent release | 11 mg/l | |
| treatment plant | 10 mg/l | |
| Fresh water sediment | 1.52 mg/kg | based on dry weight |
| Marine sediment | 0.152 mg/kg | based on dry weight |
| Soil | 0.0699 mg/kg | based on dry weight |
| food | | Not relevant / not applicable |

**8.2 Exposure controls**

**PERSONAL PROTECTIVE EQUIPMENT**

**Respiratory protection**

In inadequately ventilated areas, where workplace limits are exceeded, where unpleasant odours exist or where aerosols are in use, or smoke and mist occur, use self-contained breathing apparatus or breathing apparatus with a type A filter or appropriate combined filter (e.g. where aerosols are in use, or smoke and mist occur, A-P2 or ABEK-P2), in compliance with EN 141.

**Hand protection**

The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other., 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., Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature).

**gloves suitable for permanent contact:**
Material: Nitrile rubber/nitrile latex
Break through time: >= 480 min
Layer thickness: 0.35 mm

Material: butyl-rubber
Break through time: >= 480 min
Layer thickness: 0.5 mm

**unsuitable gloves**
Material: Natural rubber/natural latex, Polyvinylchloride

**Eye protection**

Tightly fitting safety goggles

**Skin and body protection**

Wear suitable protective equipment.

**Hygiene measures**

Take off all contaminated clothing immediately.

**Protective measures**

Do not breathe vapours or spray mist. Avoid contact with the skin and the eyes.

**ENVIRONMENTAL EXPOSURE CONTROLS**

**General advice**

Do not flush into surface water or sanitary sewer system.
Do not allow material to contaminate ground water system.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties**

| | |
|---|---|
| **Physical state** | liquid; 20 °C; 1,013 hPa |
| **Form** | liquid |
| **Colour** | colourless |
| **Odour** | alcohol-like, characteristic |
| **Odour Threshold** | No valid method available |
| **pH** | 7; 20 °C |
| **Melting point/range** | < -90 °C |
| **Boiling point/boiling range** | 108 °C; 1,013 hPa |
| **Flash point** | 31 °C; 1,013 hPa |
| **Evaporation rate** | No data available |
| **Flammability (solid, gas)** | not applicable (liquid) |
| **Lower explosion limit** | 1.7 %(V) |
| **Upper explosion limit** | 10.9 %(V) |
| **Vapour pressure** | 16 hPa; 20 °C |
| **Relative vapour density** | 1.02 |
| **Density** | 0.8017 g/cm3; 20 °C |
| **Water solubility** | 70 g/l; 20 °C |
| **Partition coefficient: n-octanol/water** | log Pow: 1; 25 °C |
| **Ignition temperature** | No data available |
| **Auto-ignition temperature** | 400 °C; 1,007 hPa |
| **Viscosity, dynamic** | 3.103 mPas; 20 °C |
| **Explosive properties** | Not explosive |
| **Oxidizing properties** | not expected based on structure and functional groups |
| **Surface tension** | 69.7 mN/m; 20 °C |

**9.2 Other data**

| | |
|---|---|
| **Refractive index** | 1.396<br>at 20 °C |
| **Additional advice** | no data |

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity**

| | |
|---|---|
| **Note** | Vapours may form explosive mixture with air. |

**10.2 Chemical stability**

| | |
|---|---|
| **Note** | No data available |

**10.3 Possibility of hazardous reactions**

| | |
|---|---|
| **Hazardous reactions** | May form explosive peroxides. |

**10.4 Conditions to avoid**

| | |
|---|---|
| **Conditions to avoid** | Extremes of temperature and direct sunlight. |

**10.5 Incompatible materials to avoid**

| | |
|---|---|
| **Materials to avoid** | Oxidizing agents; |

**10.6 Hazardous decomposition products**

| | |
|---|---|
| **Hazardous decomposition products** | None known. |
| **Thermal decomposition** | Distils without decomposition at atmospheric pressure. |

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**

**Acute toxicity**

| | |
|---|---|
| **Acute oral toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>LD50 Rat: > 2,000 mg/kg; OECD Test Guideline 401<br>(literature value)<br>Based on available data, the classification criteria are not met. |
| **Acute inhalation toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>LC50 Rat: > 18.18 mg/l; 14 d<br>Test atmosphere: vapour<br>Target Organs: Lungs<br>Symptoms: reduced body weight gain, Daze<br>(literature value)<br>Based on available data, the classification criteria are not met. |
| **Acute dermal toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>LD50 Rabbit: > 2,000 mg/kg; OECD Test Guideline 402<br>(literature value)<br>Based on available data, the classification criteria are not met. |

**Skin corrosion/irritation**

| | |
|---|---|
| **Skin irritation** | 2-methylpropan-1-ol; iso-butanol:<br>Rabbit: Causes skin irritation.; OECD Test Guideline 404<br>slight irritation<br>(literature value) |

**Serious eye damage/eye irritation**

| | |
|---|---|
| **Eye irritation** | 2-methylpropan-1-ol; iso-butanol:<br>Rabbit: Irreversible effects on the eye; OECD Test Guideline 405<br>(literature value)<br>Causes serious eye damage. |

**Respiratory or skin sensitisation**

| | |
|---|---|
| **Sensitisation** | 2-methylpropan-1-ol; iso-butanol:<br>Maximisation Test Guinea pig: not sensitizing; OECD Test Guideline 406<br>The data are derived from the evaluations or test results achieved with similar products (conclusion by analogy).<br>(literature value)<br>Based on available data, the classification criteria are not met.<br>Test substance: propan-1-ol |

**Germ cell mutagenicity**

| | |
|---|---|
| **Genotoxicity in vitro** | 2-methylpropan-1-ol; iso-butanol:<br>In vitro tests did not show mutagenic effects<br>(literature value) |
| **Genotoxicity in vivo** | 2-methylpropan-1-ol; iso-butanol:<br>In vivo tests did not show mutagenic effects<br>(literature value) |
| **Remarks** | 2-methylpropan-1-ol; iso-butanol:<br>Based on available data, the classification criteria are not met. |

**Carcinogenicity**

| | |
|---|---|
| **Carcinogenicity** | 2-methylpropan-1-ol; iso-butanol:<br>The substance has been shown to be not genotoxic, therefore it is not expected to have a carcinogenic potential. |

**Reproductive toxicity**

| | |
|---|---|
| **Reproductive toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>Rat; Inhalation<br>NOAEL (F1): 7.5 mg/l<br>NOAEL (F2): 7.5 mg/l<br>Based on available data, the classification criteria are not met.<br>(literature value) |
| **Teratogenicity** | 2-methylpropan-1-ol; iso-butanol:<br>Rat; Inhalation<br>NOAEL: 10 mg/l; OECD Test Guideline 414<br>Based on available data, the classification criteria are not met.<br>(literature value) |

**STOT - single exposure**

| | |
|---|---|
| **Remarks** | 2-methylpropan-1-ol; iso-butanol:<br>May cause respiratory irritation.<br>May cause drowsiness or dizziness. |

**STOT - repeated exposure**

| | |
|---|---|
| **Remarks** | 2-methylpropan-1-ol; iso-butanol:<br>The substance or mixture is not classified as specific target organ toxicant, repeated exposure. |
| **Repeated dose toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>Rat; drinking water; 90-day<br>NOAEL: 1,450 mg/kg; OECD Test Guideline 408<br>Based on available data, the classification criteria are not met.<br>(literature value) |

**Aspiration hazard**

| | |
|---|---|
| **Aspiration toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>Not applicable |

| | |
|---|---|
| **Toxicological information** | 2-methylpropan-1-ol; iso-butanol:<br>Toxicokinetics<br>The substance is readily absorbed through skin, intestinal tract and lungs.<br>The substance is uniformly distributed throughout the organism.<br>The substance is rapidly eliminated from the body. |

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

| | |
|---|---|
| **Toxicity to fish** | 2-methylpropan-1-ol; iso-butanol:<br>LC50 (96 h) Pimephales promelas (fathead minnow): > 100 mg/l ; flow-through test (literature value) |
| **Toxicity to fish - Chronic toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>The study is not necessary. |
| **Toxicity to daphnia and other aquatic invertebrates** | 2-methylpropan-1-ol; iso-butanol:<br>EC50 (48 h) Daphnia pulex (Water flea): > 100 mg/l ; static test (literature value) |
| **Toxicity to daphnia and other aquatic invertebrates - Chronic toxicity** | 2-methylpropan-1-ol; iso-butanol:<br>NOEC (21 d) Daphnia magna (Water flea): 20 mg/l; semi-static test; (literature value) |
| **Toxicity to aquatic plants** | 2-methylpropan-1-ol; iso-butanol:<br>EC50 (72 h) Pseudokirchneriella subcapitata (algae): > 100 mg/l ; static test; OECD Test Guideline 201; (literature value) |
| **Toxicity to bacteria** | 2-methylpropan-1-ol; iso-butanol:<br>EC10 (16 h) Pseudomonas putida: > 100 mg/l; Cell multiplication inhibition test; OECD Test Guideline 209<br>(literature value) |
| **Toxicity to soil dwelling organisms** | 2-methylpropan-1-ol; iso-butanol:<br>The study is not necessary.<br>Justification:<br>Bioaccumulation is unlikely.<br>Readily biodegradable.<br>Not expected to adsorb on soil. |
| **Toxicity to terrestrial flora** | 2-methylpropan-1-ol; iso-butanol:<br>The study is not necessary.<br>Justification:<br>Readily biodegradable. |

### 12.2 Persistence and degradability

| | |
|---|---|
| **Biodegradability** | 2-methylpropan-1-ol; iso-butanol:<br>Readily biodegradable.; > 70 %; 28 d; aerobic; OECD Test Guideline 301D<br>(literature value) |

### 12.3 Bioaccumulative potential

| | |
|---|---|
| **Bioaccumulation** | 2-methylpropan-1-ol; iso-butanol:<br>No bioaccumulation is to be expected (log Pow <= 4). |

### 12.4 Mobility in soil

| | |
|---|---|
| **Mobility** | 2-methylpropan-1-ol; iso-butanol:<br>Adsorption/Soil; Koc: 2.1; log Koc: 0.31; calculated<br>Highly mobile in soils<br>Not expected to adsorb on soil. |

### 12.5 Results of PBT and vPvB assessment

| | |
|---|---|
| **Results of PBT assessment** | 2-methylpropan-1-ol; iso-butanol:<br>Based on available data, the classification criteria are not met. |

**12.6 Other adverse effects**

| | |
|---|---|
| **General advice** | 2-methylpropan-1-ol; iso-butanol:<br>None known. |

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

| | |
|---|---|
| **Product** | Following pre-treatment and observing the regulations for hazardous wastes, it must be taken to a permitted hazardous wastes landfill or hazardous wastes incinerator. |
| **Contaminated packaging** | Contaminated packaging should be emptied optimally and after being suitably cleaned returned for re-use. |
| **waste code of the European Union: EWC** | A waste code in accordance with the European Waste Catalogue (EWC) may not be assigned to this product since it admits of a classification only when the consumer uses it for some purpose. |

## SECTION 14: TRANSPORT INFORMATION

**14.1 UN number**

| | |
|---|---|
| **ADR** | 1212 |
| **RID** | 1212 |
| **ADN** | 1212 |
| **IMDG** | 1212 |
| **ICAO/IATA** | 1212 |

**14.2 Proper shipping name**

| | |
|---|---|
| **ADR** | ISOBUTANOL |
| **RID** | ISOBUTANOL |
| **ADN** | ISOBUTANOL |
| **IMDG** | ISOBUTANOL |
| **ICAO/IATA** | ISOBUTANOL |

**14.3 Transport hazard class**

| | |
|---|---|
| **ADR** | 3 |
| **RID** | 3 |
| **ADN** | 3 |
| **IMDG** | 3 |
| **ICAO/IATA** | 3 |

**14.4 Packing group**

| | |
|---|---|
| **ADR** | III |
| **RID** | III |
| **ADN** | III |

| | |
|---|---|
| **IMDG** | III |
| **ICAO/IATA** | III |

**14.5 Environmental hazards**

| | | |
|---|---|---|
| **ADR** | Environmentally hazardous | no |
| **RID** | Environmentally hazardous | no |
| **ADN** | Environmentally hazardous | no |
| **IMDG** | Marine pollutant | no |
| **ICAO/IATA** | Environmentally hazardous | no |

**14.6 Special precautions for user**

| | | | |
|---|---|---|---|
| **ADR** | Hazard Identification Number | | 30 |
| | Labels | | 3 |
| | Tunnel restriction code | | (D/E) |
| **IMDG** | Labels 3 | | |
| | EmS Number 1 | F-E | |
| | EmS Number 2 | S-D | |
| **ICAO/IATA** | Labels | 3 | |

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

| | |
|---|---|
| Remarks | No information available. |

## SECTION 15: REGULATORY INFORMATION

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

| | |
|---|---|
| **Occupational restrictions** | Employment restrictions for children and young workers in accordance with Directive 94/33/EC and the respective national provisions are to be observed. |

**NATIONAL/OTHER REGULATIONS**

| | |
|---|---|
| **Legislation on the control of major-accident hazards involving dangerous substances** | Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.<br>list entry in the directive:: FLAMMABLE LIQUIDS; P5c<br>Qualifiying quantity 1: 5,000 t; Qualifiying quantity 2: 50,000 t; |

**NOTIFICATION STATUS**

| | | |
|---|---|---|
| Switzerland. Consolidated Inventory | CH INV | listed (product or constituents are listed) |
| US. Toxic Substances Control Act | TSCA | listed (product or constituents are listed) |
| Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL) | DSL | listed (product or constituents are listed) |
| Australia. Industrial Chemical (Notification and Assessment) Act | AICS | listed (product or constituents are listed) |
| Japan. Kashin-Hou Law List | ENCS (JP) | listed (product or constituents are listed) |
| Japan. Industrial Safety & Health Law (ISHL) List | ISHL (JP) | listed (product or constituents are listed) |
| Korea. Existing Chemicals Inventory (KECI) | KECI (KR) | listed (product or constituents are listed) |
| Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act | PICCS (PH) | listed (product or constituents are listed) |
| China. Inventory of Existing Chemical Substances | INV (CN) | listed (product or constituents are listed) |

Please note: the names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in chapter 3.

**15.2 Chemical safety assessment**

**2-methylpropan-1-ol**

A Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: OTHER INFORMATION

**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |

**Further information:**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.
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.

### Key or legend to abbreviations and acronyms used in the safety data sheet

| | |
|---|---|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure |
| ADR | Accord européen relatif au transport international des marchandises Dangereuses par Route |
| AICS | Australian Inventory of Chemical Substances |
| ANSI | American National Standards Institute |
| ASTM | American Society of Testing and Materials (US) |
| BCF | Bioconcentration factor |
| CLP | Regulation on Classification, Labelling and Packaging of Substances and Mixtures |
| DIN | Deutsches Institut für Normung |
| DNEL | Derived No-Effect Level |
| DSL | Domestic Substances List |
| EC… | Effect concentration ... % |
| ENCS | Existing Notified Chemical Substances (Japan) |
| EWC | European Waste Catalogue |
| IATA | International Air Transport Association |
| IBC | Intermediate Bulk Container |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods |
| IMO | International Maritime Organization |
| ISHL | Industrial Safety and Health Law (Japan) |
| ISO | International Organization for Standardization |
| IUAPC | International Union of Pure and Applied Chemistry |
| KECI | Korea Existing Chemicals Inventory |
| LC… | Lethal Concentration, ...% |
| LD… | Lethal Dose, ...% |
| MARPOL | International Convention for the Prevention of Pollution From Ships |
| NDSL | Non-Domestic Substances List |
| NOAEL | no observable adverse effect level |
| NOEL/NOEC | No Observed-effect level/concentration |
| NZIoC | New Zealand Inventory of Chemicals |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | persistent, bioaccumulative, toxic |
| PICCS | Philippine Inventory of Chemicals and Chemical Substances |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport international ferroviaire de marchandises dangereuses |
| TG | Test Guideline |
| TRGS | Technische Regeln für Gefahrstoffe |
| TSCA | Toxic Substances Control Act |
| vPvB | very persistent, very bioaccumulative |
| WGK | Wassergefährdungsklasse |

## Annex

**Attachments to the safety data sheet and/or lists of the identified uses for the listed substances can be downloaded using the internet links below.**

http://www.sasolgermany.de/fileadmin/doc/productsafety/Annex/000000009580_EN_01.pdf