# SAFETY DATA SHEET

**DOW CHEMICAL COMPANY LIMITED**

Safety Data Sheet according to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law

**Product name: DOWANOL™ PM Glycol Ether**

**Revision Date:** 09.11.2022
**Version:** 18.0
**Print Date:** 10.11.2022
**Date of last issue:** 22.08.2019

DOW CHEMICAL COMPANY LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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

**1.1 Product identifier**
**Product name:** DOWANOL™ PM Glycol Ether

**Chemical name of the substance:** 1-methoxy-2-propanol
**CASRN:** 107-98-2
**EC-No.:** 203-539-1

**1.2 Relevant identified uses of the substance or mixture and uses advised against**
**Identified uses:** Solvent for consumer and industrial applications. Chemical intermediate.

**1.3 Details of the supplier of the safety data sheet**
**COMPANY IDENTIFICATION**
DOW CHEMICAL COMPANY LIMITED
5 OAKWATER AVENUE
CHEADLE ROYAL BUSINESS PARK
CHEADLE
SK8 3SR
UNITED KINGDOM

| | |
|---|---|
| **Customer Information Number:** | +44 (0) 1663 746518 |
| | SDSQuestion@dow.com |
| **Fax:** | +44 (0) 1663 746605 |

**1.4 EMERGENCY TELEPHONE NUMBER**
**24-Hour Emergency Contact:** 0031 115 694 982
**Local Emergency Contact:** 00 31 115 69 4982

## SECTION 2: HAZARDS IDENTIFICATION

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008, as retained and amended in UK law**
Flammable liquids - Category 3 - H226
Specific target organ toxicity - single exposure - Category 3 - H336

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

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008, as retained and amended in UK law**

**Hazard pictograms**

**Signal word: WARNING**

**Hazard statements**

| | |
|---|---|
| H226 | Flammable liquid and vapour. |
| H336 | May cause drowsiness or dizziness. |

**Precautionary statements**

| | |
|---|---|
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P261 | Avoid breathing mist or vapours. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. |
| P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. |
| P370 + P378 | In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish. |
| P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |

**2.3 Other hazards**

This product contains no substances assessed to be PBT or vPvB at levels of 0.1% or higher.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**3.1 Substances**

This product is a substance.

| CASRN / EC-No. / Index-No. | UK REACH Registration Number | Concentration | Component | Classification: REGULATION (EC) No 1272/2008, as retained and amended in UK law |
|---|---|---|---|---|
| **CASRN**<br>107-98-2 | _ | >= 99.5 % | 1-methoxy-2-propanol | Flam. Liq. 3; H226<br>STOT SE 3; H336 |

| | | | | |
|---|---|---|---|---|
| **EC-No.**<br>203-539-1<br>**Index-No.**<br>603-064-00-3 | | | | (Central nervous system)<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>3,739 mg/kg<br>4,277 mg/kg<br>Acute inhalation toxicity:<br>30.02 mg/l, 4 Hour, vapour<br>Acute dermal toxicity:<br>> 2,000 mg/kg |

| | | | | |
|---|---|---|---|---|
| **CASRN**<br>1589-47-5<br>**EC-No.**<br>216-455-5<br>**Index-No.**<br>603-106-00-0 | _ | < 0.3 % | 2-methoxypropanol | Flam. Liq. 3; H226<br>Skin Irrit. 2; H315<br>Eye Dam. 1; H318<br>Repr. 1B; H360D<br>STOT SE 3; H335<br>(Respiratory system)<br><br>Acute toxicity estimate<br>Acute oral toxicity:<br>> 5,000 mg/kg<br>Acute dermal toxicity:<br>> 5,000 mg/kg |

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:**
First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**Skin contact:** Wash off with plenty of water.

**Eye contact:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

**4.2 Most important symptoms and effects, both acute and delayed:**
May cause drowsiness or dizziness.

**4.3 Indication of any immediate medical attention and special treatment needed**
**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## SECTION 5: FIREFIGHTING MEASURES

**5.1 Extinguishing media**

**Suitable extinguishing media:** Water fog or fine spray.. Dry chemical fire extinguishers.. Carbon dioxide fire extinguishers.. Foam.. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective..

**Unsuitable extinguishing media:** Do not use direct water stream.. Straight or direct water streams may not be effective to extinguish fire..

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

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.. Combustion products may include and are not limited to:. Carbon monoxide.. Carbon dioxide..

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation.. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.. When product is stored in closed containers, a flammable atmosphere can develop.. Electrically ground and bond all equipment.. Flammable mixtures of this product are readily ignited even by static discharge.. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur.. Flammable mixtures may exist within the vapor space of containers at room temperature.. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9..

**5.3 Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry.. Stay upwind. Keep out of low areas where gases (fumes) can accumulate.. Water may not be effective in extinguishing fire.. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed.. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles.. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container.. Burning liquids may be extinguished by dilution with water.. Do not use direct water stream. May spread fire.. Eliminate ignition sources.. Move container from fire area if this is possible without hazard.. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage..

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).. If protective equipment is not available or not used, fight fire from a protected location or safe distance..

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Isolate area. Refer to section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**6.2 Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**6.3 Methods and materials for containment and cleaning up:** Small spills: Absorb with materials such as: Sand. Vermiculite. Collect in suitable and properly labeled containers. Large spills: Contain spilled material if possible. Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. If available, use foam to smother or suppress. See Section 13, Disposal Considerations, for additional information.

**6.4 Reference to other sections:** References to other sections, if applicable, have been provided in the previous sub-sections.

## SECTION 7: HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid breathing vapor. Use with adequate ventilation. Keep container closed. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Electrically bond and ground all containers and equipment before transfer or use of material. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Keep away from heat, sparks and flame. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION. This product is a poor conductor of electricity and can become electrostatically charged, even in bonded or grounded equipment. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Handling operations that can promote accumulation of static charges include but are not limited to mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations.
Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

**7.2 Conditions for safe storage, including any incompatibilities:** Flammable mixtures may exist within the vapor space of containers at room temperature. Keep container closed. Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in the following material(s): Carbon steel. Stainless steel. Phenolic lined steel drums. Do not store in: Aluminum. Copper. Galvanized iron. Galvanized steel.

**Storage stability**

**Shelf life: Use within**
24 Month
**Bulk**
6 Month

**7.3 Specific end use(s):** See the technical data sheet on this product for further information.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

| Component | Regulation | Type of listing | Value |
|---|---|---|---|
| 1-methoxy-2-propanol | ACGIH | TWA | 50 ppm |
| | Further information: A4: Not classifiable as a human carcinogen | | |
| | ACGIH | STEL | 100 ppm |
| | Further information: A4: Not classifiable as a human carcinogen | | |
| | GB EH40 | TWA | 375 mg/m3 100 ppm |
| | Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. | | |
| | GB EH40 | STEL | 560 mg/m3 150 ppm |
| | Further information: Sk: Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. | | |
| 2-methoxypropanol | Dow IHG | TWA | 1.5 ppm |
| | Dow IHG | STEL | 4.5 ppm |

**Recommended monitoring procedures**
Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with the Occupational Exposure Limits and the adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples should be analysed by an accredited laboratory.
Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy); European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents); European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents). Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.
National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods.
Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.
Health and Safety Executive (HSE), United Kingdom: Methods for the Determination of Hazardous Substances.
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany.
L'Institut National de Recherche et de Securité, (INRS), France.

**Derived No Effect Level**
1-methoxy-2-propanol
**Workers**

| *Acute systemic effects* | | *Acute local effects* | | *Long-term systemic effects* | | *Long-term local effects* | |
|---|---|---|---|---|---|---|---|
| Dermal | Inhalation | Dermal | Inhalation | Dermal | Inhalation | Dermal | Inhalation |
| n.a. | 553.5 mg/m3 | n.a. | 553.5 mg/m3 | 183 mg/kg bw/day | 369 mg/m3 | n.a. | n.a. |

**Consumers**

| *Acute systemic effects* | | | *Acute local effects* | | *Long-term systemic effects* | | | *Long-term local effects* | |
|---|---|---|---|---|---|---|---|---|---|
| Dermal | Inhalation | Oral | Dermal | Inhalation | Dermal | Inhalation | Oral | Dermal | Inhalation |
| n.a. | n.a. | n.a. | n.a. | n.a. | 78 mg/kg bw/day | 43.9 mg/m3 | 33 mg/kg bw/day | n.a. | n.a. |

**Predicted No Effect Concentration**
1-methoxy-2-propanol

| **Compartment** | **PNEC** |
|---|---|
| Fresh water | 10 mg/l |
| Marine water | 1 mg/l |
| Intermittent use/release | 100 mg/l |
| Sewage treatment plant | 100 mg/l |
| Fresh water sediment | 52.3 mg/kg dry weight (d.w.) |
| Marine sediment | 5.2 mg/kg dry weight (d.w.) |
| Soil | 4.59 mg/kg dry weight (d.w.) |

**8.2 Exposure controls**
**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**Individual protection measures**

**Eye/face protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent. If exposure causes eye discomfort, use a full-face respirator (meeting standard EN 136) with organic vapor cartridge (meeting standard EN 14387).

**Skin protection**

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from.

The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Wear clean, body-covering clothing.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.
Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 ºC, meeting standard EN 14387).

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

| | |
|---|---|
| **Appearance** | |
| **Physical state** | Liquid. |
| **Color** | Colorless |
| **Odor** | Ether |
| **Odor Threshold** | No test data available |
| **pH** | Not applicable |
| **Melting point/range** | Not applicable to liquids |
| **Freezing point** | -96 °C *Literature* |
| **Boiling point (760 mmHg)** | 120.15 °C at 1,013 hPa *OECD Test Guideline 103* |
| **Flash point** | **closed cup** 31 °C *Setaflash Closed Cup* |
| **Evaporation Rate (Butyl Acetate = 1)** | No test data available |
| **Flammability (solid, gas)** | Not applicable to liquids |
| **Flammability (liquids)** | Not expected to be a static-accumulating flammable liquid. |
| **Lower explosion limit** | 1.48 % vol *Literature* |
| **Upper explosion limit** | 13.7 % vol *Literature* |
| **Vapor Pressure** | 1.56 kPa at 25 °C *Literature* |
| **Relative Vapor Density (air = 1)** | 3.12 at 25 °C *Literature* |
| **Relative Density (water = 1)** | 0.919 at 25 °C / 25 °C *Literature* |
| **Water solubility** | completely miscible |
| **Partition coefficient: n-octanol/water** | log Pow: 0.37 *Measured* |

| | |
|---|---|
| **Auto-ignition temperature** | 287 °C *Literature* |
| **Decomposition temperature** | No test data available |
| **Dynamic Viscosity** | 1.7 mPa.s at 25 °C *Literature* |
| **Kinematic Viscosity** | 1.86 mm2/s at 25 °C *Literature* |
| **Explosive properties** | No |
| **Oxidizing properties** | No |

**9.2 Other information**

| | |
|---|---|
| **Liquid Density** | 0.916 g/cm3 at 25 °C *Literature* |
| **Molecular weight** | 90.1 g/mol *Literature* |

NOTE: The physical data presented above are typical values and should not be construed as a specification.

## SECTION 10: STABILITY AND REACTIVITY

**10.1 Reactivity:** No data available

**10.2 Chemical stability:** Stable under recommended storage conditions. See Storage, Section 7.

**10.3 Possibility of hazardous reactions:** Polymerization will not occur.

**10.4 Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge.

**10.5 Incompatible materials:** Avoid contact with: Strong acids. Strong bases. Strong oxidizers.

**10.6 Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials.. Decomposition products can include and are not limited to:. Carbon monoxide.. Carbon dioxide..

## SECTION 11: TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

**11.1 Information on toxicological effects**

**Information on likely routes of exposure**
Ingestion, Inhalation, Skin contact, Eye contact.

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute Toxicity Endpoints:**

**Acute oral toxicity**

**Information for the Product:**

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

Based on product testing:
LD50, Rat, male, 3,739 mg/kg OECD 401 or equivalent
Based on product testing:
LD50, Rat, female, 4,277 mg/kg OECD 401 or equivalent

**Information for components:**

**1-methoxy-2-propanol**
LD50, Rat, male, 3,739 mg/kg OECD 401 or equivalent

LD50, Rat, female, 4,277 mg/kg OECD 401 or equivalent

**2-methoxypropanol**
Single dose oral LD50 has not been determined.

For similar material(s): LD50, Rat, > 5,000 mg/kg

**Acute dermal toxicity**

**Information for the Product:**

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on product testing:
LD50, Rabbit, male and female, > 2,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

**Information for components:**

**1-methoxy-2-propanol**
LD50, Rabbit, male and female, > 2,000 mg/kg OECD 402 or equivalent No deaths occurred at this concentration.

**2-methoxypropanol**
The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, > 5,000 mg/kg

**Acute inhalation toxicity**

**Information for the Product:**

Brief exposure (minutes) is not likely to cause adverse effects. The odor is objectionable at 100 ppm; higher levels produce eye, nose, and throat irritation and are intolerable at 1000 ppm. Anesthetic effects are seen at or above 1000 ppm.

Based on product testing:

LC50, Rat, male and female, 4 Hour, vapour, 30.02 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.
**Information for components:**

**1-methoxy-2-propanol**
LC50, Rat, male and female, 4 Hour, vapour, 30.02 mg/l OECD Test Guideline 403 No deaths occurred at this concentration.

**2-methoxypropanol**
As product: The LC50 has not been determined.

**Skin corrosion/irritation**

**Information for the Product:**

Based on product testing:
Brief contact is essentially nonirritating to skin.

**Information for components:**

**1-methoxy-2-propanol**
Brief contact is essentially nonirritating to skin.

**2-methoxypropanol**
Prolonged contact may cause skin irritation with local redness.
Repeated contact may cause skin irritation with local redness.

**Serious eye damage/eye irritation**

**Information for the Product:**

Based on product testing:
May cause slight eye irritation.
May cause slight temporary corneal injury.

**Information for components:**

**1-methoxy-2-propanol**
May cause slight eye irritation.
May cause slight temporary corneal injury.

**2-methoxypropanol**
May cause eye irritation.

**Sensitization**

**Information for the Product:**

For skin sensitization:

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

**Information for components:**

**1-methoxy-2-propanol**
For skin sensitization:
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

**2-methoxypropanol**
For similar material(s):
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause drowsiness or dizziness.

**Information for the Product:**

Product test data not available.

**Information for components:**

**1-methoxy-2-propanol**
May cause drowsiness or dizziness.
Route of Exposure: Inhalation
Target Organs: Central nervous system

**2-methoxypropanol**
May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

**Aspiration Hazard**

**Information for the Product:**

Based on physical properties, not likely to be an aspiration hazard.

**Information for components:**

**1-methoxy-2-propanol**
Based on physical properties, not likely to be an aspiration hazard.

**2-methoxypropanol**
Based on physical properties, not likely to be an aspiration hazard.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

**Information for the Product:**

Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
In animals, effects have been reported on the following organs:
Liver
Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

**Information for components:**

**1-methoxy-2-propanol**
Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.
In animals, effects have been reported on the following organs:
Liver.
Kidney effects and/or tumors have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

**2-methoxypropanol**
Excessive exposure may cause irritation to upper respiratory tract (nose and throat).

**Carcinogenicity**

**Information for the Product:**

Did not cause cancer in laboratory animals.

**Information for components:**

**1-methoxy-2-propanol**
Did not cause cancer in laboratory animals.

**2-methoxypropanol**
Similar formulations did not cause cancer in laboratory animals.

**Teratogenicity**

**Information for the Product:**

Based on product testing: Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

**Information for components:**

**1-methoxy-2-propanol**
Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

**2-methoxypropanol**
Has caused birth defects in laboratory animals at doses nontoxic to the mother.

**Reproductive toxicity**

**Information for the Product:**

Based on product testing: In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Information for components:**

**1-methoxy-2-propanol**
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**2-methoxypropanol**
In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Mutagenicity**

**Information for the Product:**

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**Information for components:**

**1-methoxy-2-propanol**
In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

**2-methoxypropanol**
In vitro genetic toxicity studies were negative. For similar material(s): Animal genetic toxicity studies were negative.

## SECTION 12: ECOLOGICAL INFORMATION

*Ecotoxicological information appears in this section when such data is available.*

**12.1 Toxicity**

**Acute toxicity to fish**
Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

LC50, Leuciscus idus (Golden orfe), static test, 96 Hour, 6,812 mg/l, DIN 38412

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, >= 1,000 mg/l, OECD Test Guideline 203 or Equivalent

LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, 20,800 mg/l, OECD Test Guideline 203 or Equivalent

**Acute toxicity to aquatic invertebrates**
LC50, Daphnia magna (Water flea), static test, 48 Hour, 21,100 - 25,900 mg/l, OECD Test Guideline 202 or Equivalent

**Acute toxicity to algae/aquatic plants**
ErC50, Pseudokirchneriella subcapitata (green algae), static test, 7 d, Growth rate inhibition, > 1,000 mg/l, OECD Test Guideline 201 or Equivalent

**12.2 Persistence and degradability**
**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
**Biodegradation:** 96 %
**Exposure time:** 28 d
**Method:** OECD Test Guideline 301E or Equivalent

**Photodegradation**
**Test Type:** Half-life (indirect photolysis)
**Sensitization:** OH radicals
**Atmospheric half-life:** 7.8 Hour
**Method:** Estimated.

**12.3 Bioaccumulative potential**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient: n-octanol/water(log Pow):** 0.37 at 20 °C Measured
**Bioconcentration factor (BCF):** < 2

**12.4 Mobility in soil**
**Partition coefficient (Koc):** 0.2 - 1.0 Estimated.

**12.5 Results of PBT and vPvB assessment**
This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**12.6 Other adverse effects**
This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required. Do not dump into any sewers, on the ground, or into any body of water.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

## SECTION 14: TRANSPORT INFORMATION

**Classification for ROAD and Rail transport (ADR/RID):**

| | | |
|---|---|---|
| **14.1** | **UN number or ID number** | UN 3092 |
| **14.2** | **UN proper shipping name** | 1-METHOXY-2-PROPANOL |
| **14.3** | **Transport hazard class(es)** | 3 |
| **14.4** | **Packing group** | III |
| **14.5** | **Environmental hazards** | Not considered environmentally hazardous based on available data. |
| **14.6** | **Special precautions for user** | Hazard Identification Number: 30 |

**Classification for INLAND waterways (ADNR/ADN):**

| | | |
|---|---|---|
| **14.1** | **UN number or ID number** | UN 3092 |
| **14.2** | **UN proper shipping name** | 1-METHOXY-2-PROPANOL |
| **14.3** | **Transport hazard class(es)** | 3 |
| **14.4** | **Packing group** | III |
| **14.5** | **Environmental hazards** | Not considered environmentally hazardous based on available data. |
| **14.6** | **Special precautions for user** | No data available. |

**Classification for SEA transport (IMO-IMDG):**

| | | |
|---|---|---|
| **14.1** | **UN number or ID number** | UN 3092 |
| **14.2** | **UN proper shipping name** | 1-METHOXY-2-PROPANOL |
| **14.3** | **Transport hazard class(es)** | 3 |
| **14.4** | **Packing group** | III |
| **14.5** | **Environmental hazards** | Not considered as marine pollutant based on available data. |
| **14.6** | **Special precautions for user** | EmS: F-E, S-D |
| **14.7** | **Maritime transport in bulk according to IMO instruments** | Consult IMO regulations before transporting ocean bulk |

**Classification for AIR transport (IATA/ICAO):**

| | | |
|---|---|---|
| **14.1** | **UN number or ID number** | UN 3092 |

| | | |
|---|---|---|
| **14.2** | **UN proper shipping name** | 1-Methoxy-2-propanol |
| **14.3** | **Transport hazard class(es)** | 3 |
| **14.4** | **Packing group** | III |
| **14.5** | **Environmental hazards** | Not applicable |
| **14.6** | **Special precautions for user** | No data available. |

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## SECTION 15: REGULATORY INFORMATION

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

**UK REACH - UK Statutory Instruments 2019 No.758 as amended**
This product contains only components that have been either registered, notified for downstream user import (DUIN), are exempt from registration, are regarded as registered or are not subject to registration according to UK Statutory Instruments 2019 No.758 as amended (UK REACH)., The aforementioned indications of the UK REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

**UK REACH List of restrictions (Annex 17)**

Conditions of restriction for the following entries should be considered:
Number on list 3, 40
2-methoxypropanol (Number on list 30)

**Control of Major Accident Hazards Regulations 2015 (COMAH)**
Listed in Regulation: FLAMMABLE LIQUIDS
Number in Regulation: P5c
5,000 t
50,000 t

**15.2 Chemical safety assessment**
No Chemical Safety Assessment has been carried out for this substance/mixture.

## 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. |
| H360D | May damage the unborn child. |

**Product Literature**
Additional information on this product may be obtained by calling your sales or customer service contact. Ask for a product brochure.

**Hazard Rating System**
**NFPA**

| Health | Flammability | Instability |
|---|---|---|
| 1 | 3 | 0 |

**Revision**
Identification Number: 117848 / A279 / Issue Date: 09.11.2022 / Version: 18.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

| | |
|---|---|
| ACGIH | USA. ACGIH Threshold Limit Values (TLV) |
| Dow IHG | Dow Industrial Hygiene Guideline |
| GB EH40 | UK. EH40 WEL - Workplace Exposure Limits |
| STEL | Short term exposure limit |
| TWA | Time weighted average |
| Eye Dam. | Serious eye damage |
| Flam. Liq. | Flammable liquids |
| Repr. | Reproductive toxicity |
| Skin Irrit. | Skin irritation |
| STOT SE | Specific target organ toxicity - single exposure |

**Full text of other abbreviations**
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; 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; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

**Information Source and References**
This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW CHEMICAL COMPANY LIMITED urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
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