



Safety Data Sheet according to Globally Harmonized System (GHS)

Printing date 2023-03-24

Revision: 2023-03-24

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

- **Product identifier**
- **Trade name:** 2-Methyl- 1,3-Propanediol (MPO)
- **Synonyms:**
1,3-Dihydroxy-2-MethylPropane; 2-Methyl-1,3-Propanediol; 2-Methyl-Propan-1,3-Diol; 2-methyl-3-propanediol; 3-Propanediol, 2-methyl-1 Methylpropanediol; 3-Methyl-1,3-Propanediol; 1,3-Propanediol, 2-methyl-;
- **CAS Number:**
2163-42-0
- **Relevant identified uses of the substance or mixture and uses advised against :**
- **Identified/Recommended uses:**
Raw Material for:
Anti-freezer
Monomer for the preparation of copolymer
Agricultural chemicals
Coating
Binder
Cleaner solvent
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Dairen Chemical Corporation
18th Floor, No. 223 Songjiang Rd., Zhongshan District
104072, Taipei, Taiwan
Tel: +886-2-7752-2800 Fax: +886-2-2509-9619
www.dcc.com.tw
- **Further information obtainable from:** Respective plant's environmental, health, and safety (EHS) Dept.
- **Emergency telephone number:** +886-2-7752-2800 (08:30-17:30; GMT+8)

2 Hazards identification

- **Classification of the substance or mixture:**
The substance is not classified as hazardous according to the Globally Harmonised System (GHS).
- **Label elements:**
- **Hazard pictograms:** None (Not Required) - Not Regulated/Not Hazardous
- **Signal word:** None (Not Required) - Not Regulated/Not Hazardous
- **Hazard statements:** None (Not Required) - Not Regulated/Not Hazardous
- **Other hazard:** None known.

3 Composition/information on ingredients

- **Chemical characterisation:** Substances
- **CAS No. Description**
2163-42-0 2-methyl-1,3-propanediol ≥98%

4 First aid measures

- **Description of first aid measures**
- **General information:**
No special measures required.
First aider needs to protect himself.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Rinse cautiously with water for several minutes.
If skin irritation continues, consult a doctor.

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- **After eye contact:**
Rinse opened eye for several minutes under running water.
Rinse opened eye for 15 minutes under running water. If symptom persists consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Most important symptoms and effects, both acute and delayed:**
No known chronic or acute health risks.
- **Indication of any immediate medical attention and special treatment needed**
Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
Water spray
Alcohol resistant foam
Dry Powder
Carbon dioxide
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents:** No further relevant information available.
- **Special hazards arising from the substance or mixture**
Vapours are heavier than air and may spread along floors.
Pay attention to flashback.
- **Advice for firefighters**
- **Protective equipment:**
Wear protective fire fighting clothing (including fire fighting helmet, coat, trousers, boots, and gloves).
Wear self-contained respiratory protective device.
Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves).
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Sweep up. Contain spilled material if possible. Collect in suitable and properly labeled containers.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Wear protective gloves/protective clothing/eye protection/face protection.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take action to prevent static discharges.

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- No special measures required.
- Use personal protective equipment as required.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Conditions for safe storage, including any incompatibilities**
Store in a cool location.
Store in cool, dry place in tightly closed receptacles.
- **Further information about storage conditions:** None.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:**
Use engineering controls to maintain airborne level below exposure limit requirements or guidelines.
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Ingredients with biological limit values:** No further relevant information available.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
Wash hands before breaks and at the end of work.
- **Respiratory protection:** Not required.
- **Protection of hands:**



Protective gloves

The selected protective gloves have to satisfy the specifications of standard EN 374 or its equivalent.
Replace gloves immediately when torn or any change in appearance (dimension, colour, flexibility etc) is noticed.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

Nitrile rubber, NBR
Natural latex

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Goggles recommended during refilling

- **Body protection:**

Boots
Protective work clothing

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Colour:

Colourless

· Odour:

Odourless

· Odour threshold:

Not determined.

· pH-value:

Not determined.

· Melting point/freezing point:

-54 °C

· Initial boiling point and boiling range:

212 °C (distillation method)

· Flash point:

127 °C (closed cup Pensky-Martens)

· Evaporation rate

Not determined.

· Flammability (solid, gas):

Not applicable.

· Auto-ignition temperature:

380 °C (@1010 hPa)

· Decomposition temperature:

Not determined.

· Ignition temperature:

Not determined.

· Explosive properties:

Product does not present an explosion hazard.

· Explosion limits:

Lower:

Not determined.

Upper:

Not determined.

· Vapour pressure at 25 °C:

0.03 hPa

· Density at 20 °C:

1.01 g/cm³ (pycnometer method)

· Relative density

Not determined.

· Vapour density

Not determined.

· Evaporation rate

Not determined.

· Solubility in / Miscibility with
water at 20 °C:

>100 g/l

· Partition coefficient: n-octanol/water at 20 °C:

-0.6 log POW (shake-flask method)

· Viscosity:

No information available.

Dynamic:

Not determined.

Kinematic:

Not determined.

VOC (EC)

0,00 %

10 Stability and reactivity

· **Reactivity:** When properly handled and stored, no dangerous reaction is known.· **Chemical stability:** This product is stable under prescribed use and storage.· **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

· **Possibility of hazardous reactions:** No dangerous reactions known.· **Conditions to avoid:** Protect from heat. Keep ignition sources away.· **Incompatible materials:** Strong oxidizing agents· **Hazardous decomposition products:** Carbon monoxide (CO) and carbon dioxide (CO₂)

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity** Not classified based on available data.

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LD/LC50 values relevant for classification:**2163-42-0 2-methyl-1,3-propanediol**

Oral LD50 > 5000 mg/kg (rat) (Health Effects Test Guidelines, US EPA, 1982)

- **Skin corrosion/irritation:** Not classified based on available data.
- **Serious eye damage/eye irritation:** Not classified based on available data.
- **Respiratory or skin sensitization:** Not classified based on available data.
- **Germ Cell Mutagenicity:** Not classified based on available data.
- **Carcinogenicity:** Not classified based on available data.
- **Reproductive Toxicity:** Not classified based on available data.
- **Specific Target Organ Toxicity - Single Exposure (STOT SE):** Not classified based on available data.
- **Specific Target Organ Toxicity - Repeated Exposure (STOT RE):**
Not classified based on available data.
- **Aspiration Hazard:**
Not classified based on available data.
Based on physical properties, not likely to be an aspiration hazard.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:**
Not classified based on available data.

2163-42-0 2-methyl-1,3-propanediol

EC50/48h (static)	> 1000 mg/l (daphnia)
EC50/72h (static)	> 1000 mg/l (algae)
LC50/96h (static)	> 1000 mg/l (fish)

- **Persistence and degradability**
Easily biodegradable
Degradation : 83% (28d, OECD N/A; DOC)
- **Bioaccumulative potential**
Bioaccumulation is unlikely.
Partition coefficient, n-octanol/water (log Kow) : -0.6
- **Mobility in soil** Partition coefficient, soil organic carbon/water (Koc) : < 1.25
- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Recover or recycle if possible.
Contact waste processors for recycling information.
After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.
Any disposal method should also comply with national, regional, provincial, and local laws.
- **Uncleaned packaging:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

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Disposal must be made according to official regulations.

14 Transport information

- **Dangerous Goods classification Status:** Not classified as a dangerous good with respect to transport regulations (IMDG, IATA, ADN, ADR, US DOT).
- **UN-Number**
- **ADR, ADN, IMDG, IATA** None (Not a Dangerous Good)
- **UN proper shipping name**
- **ADR, ADN, IMDG, IATA** None (Not a Dangerous Good)
- **Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** None (Not a Dangerous Good)
- **Packing group**
- **ADR, IMDG, IATA** None (Not a Dangerous Good)
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **UN "Model Regulation":** None (Not a Dangerous Good)

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Status of global inventories:**
All component(s) within this product is listed or exempted from the following country's chemical inventory:
Mexico - INSQ
USA – TSCA
Australia – AICS
Canada – DSL
China – IECSC
EU – EINECS/NLP
Japan – ENCS
Korea – KECI
New Zealand – NZIoC
Philippines – PICCS
Taiwan – TCSI
Thailand - TECI
Vietnam – NCI

16 Other information

- **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
- **Sources**
Most toxicological and eco-toxicological data are obtained from European Chemical Agency (ECHA)'s public dissemination website.

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<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

General Disclaimers:

DCC Group recommends that all the users/customers/recipients to study this Safety Data Sheet (SDS) carefully and understand all the data or any potential hazards associated with this product. Please consult with appropriate expert if necessary. The information herein is provided in good faith and is believed to be accurate on the date of issue. No warranty, expressed or implied, is given. It is the customer's/user's responsibility to ensure that they are complying with local, regional, state, provincial, and/or national laws in using this product, as regulatory requirement may differ at each level. It is also the customer's/user's responsibility to determine the necessary condition required for using this product safely, as actual operating or usage conditions are beyond DCC Group's control. DCC Group will not be responsible for any SDS obtained from elsewhere other than from DCC Group. If you are unsure whether the SDS you have is current or have obtained the SDS from another source; please contact us to obtain the latest version.

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