



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

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
9th Fl., No. 301, SongJiang Rd.
Taipei City, 10483, TAIWAN
Tel: +886-2-7743-1500 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:** +886-2-7743-1500 (08:30-17:30; GMT+8)

2 Hazards identification

- **Classification of the substance or mixture**
The substance is not classified according to the Globally Harmonised System (GHS).
- **Label elements**
- **GHS label elements** None (Not Regulated)
- **Hazard pictograms** None (Not Regulated)
- **Signal word** None (Not Regulated)
- **Hazard statements** None (Not Regulated)

3 Composition/information on ingredients

- **Chemical characterisation:** **Substances**
- **CAS No. Description**
2163-42-0 2-methyl-1,3-propanediol 98%
- **Identification number(s)**
- **ELINCS Number:** 412-350-5

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

(Contd. on page 2)

—GHS—



Safety Data Sheet according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 1)

- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
 - **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
 - **After swallowing:** Do not induce vomiting; call for medical help immediately.
 - **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
 - **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
 - **For safety reasons unsuitable extinguishing agents:** Water with full jet
 - **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 self-contained respiratory protective device.
Wear protective fire fighting clothing (including 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

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
Store in cool, dry place in tightly closed receptacles.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take precautionary measures against static discharge.
- **Information about fire - and explosion protection:** Protect from heat.

(Contd. on page 3)

Safety Data Sheet according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 2)

- **Storage:**
 - **Requirements to be met by storerooms and receptacles:** Store in a cool location.
 - **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:** Not required.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** 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.

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:**



Safety glasses with side shields conforming to EN166, ANSI 87.1-2010, or equivalent.

- **Body protection:**

Protective work clothing

Boots

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

— GHS —

(Contd. on page 4)



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 3)

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Viscous
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not determined.

· Change in condition

Melting point/Melting range:	-54 °C
Boiling point/Boiling range:	212 °C (distillation method)

· Flash point: 127 °C (closed cup Pensky-Martens)

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 380 °C (@1010 hPa)

· Decomposition temperature: Not determined.

· Self-igniting: Not determined.

· Danger of explosion: 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:

Dynamic:	Not determined.
Kinematic:	Not determined.

· Solvent content:

VOC (EC) 0,00 %

· Other information: No further relevant information available.

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

(Contd. on page 5)

GHS



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 4)

- **Hazardous decomposition products:** Carbon monoxide (CO) and carbon dioxide (CO₂)

11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **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.
- **Primary irritant effect:**
 - **on the skin:** No irritating effect.
 - **on the eye:** No irritating effect.
- **Sensitisation:** No sensitising effects known.
- **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

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 Pow) : -0,6

- **Mobility in soil** Partition coefficient, soil organic carbon/water (Koc) : < 1,25

- **Other adverse effects** No further relevant information available.

— GHS —

(Contd. on page 6)



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 5)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
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:**
Packaging may be reused or recycled after cleaning.
Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
- **ADR, ADN, IMDG, IATA** None (Not Regulated)
- **UN proper shipping name**
- **ADR, ADN, IMDG, IATA** None (Not Regulated)
- **Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** None (Not Regulated)
- **Packing group**
- **ADR, IMDG, IATA** None (Not Regulated)
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **UN "Model Regulation":** -

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:
USA - TSCA
Australia - AICS
Canada - DSL
China - IECSC
EU - EINECS/NLP
Japan - ENCS
Korea - KECI
New Zealand - NZIoC
Philippine - PICCS
Taiwan - ECSI
Mexico - INSQ
- **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 7)

—GHS—



Safety Data Sheet

according to Globally Harmonized System (GHS)

Printing date 02.11.2014

Revision: 26.09.2014

Trade name: 2-Methyl- 1,3-Propanediol (MPO)

(Contd. of page 6)

Abbreviations and acronyms:

ADR: Accord européen sur le transport 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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
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.
<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.

GHS—