

Safety Data Sheet

MDR-6

Version : V1.0.0.1

Report No. : MDR-01M

Creation Date : 2018/05/07

Revision Date : 2018/05/07



*Prepared according to UN GHS (the 7th revised edition)

1 Identification of the chemical and supplier

Product identifier

Product Name	MDR-6
Cat No.	MDR-6
Synonyms	-
CAS No.	-
EC No.	-
Molecular Formula	-

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

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	Dongguan Changlian New Materials Technology Co., Ltd
Address of the company	Songsha Road ,Xiaokeng Village Industry Park, Liaobu Town, Dongguan City,Guangdong Province
Post code	523419
Telephone number	0769-83215622
Fax number	0769-83215608
E-mail address	1695982947@qq.com

Emergency phone number

Emergency phone number	0769-83215622
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2 Hazards identification

Hazard classification according to GHS

Hazard classification according to GHS	Not applicable
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Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

Hazard statements

Hazard statements	Not applicable
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Precautionary statements

◆ Prevention

Prevention	Not applicable
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◆ Response

Response	Not applicable
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◆ Storage

Storage	Not applicable
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◆ Disposal

Disposal	Not applicable
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Hazard description

◆ Physical and chemical hazards

	No information available
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◆ Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	Redness.Pain.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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3 Composition/information on ingredients

Component	Cas No.	EC No.	Concentration (weight percent, %)
Propane-1,2-diol	57-55-6	200-338-0	60~70
Glycerol	56-81-5	200-289-5	10~20
Urea	57-13-6	200-315-5	1~10
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-Ethane-1,2-diol, ethoxylated	25322-68-3	200-849-9	1~10

4 First aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
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Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse skin with plenty of water or shower.
Ingestion	Rinse mouth.
Inhalation	Fresh air, rest.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

| Most important symptoms and effects, both acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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| Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Firefighting measures

| Extinguishing media

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire.
Unsuitable extinguishing media	No special notes.

| Specific hazards arising from the substance or mixture

1	Containers may explode when heated.
2	May expansion or decompose explosively when heated or involved in fire.

| Advice for firefighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

| Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

| Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

| Methods and materials for containment and cleaning up

1	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
2	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
3	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

Precautions for handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

Precautions for storage

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
Propane-1,2-diol 57-55-6	United Kingdom	-	10	-	-
	United Kingdom	150	474	-	-
	New Zealand	150	474	-	-
	Latvia	-	7	-	-
	Ireland	-	10	-	-
	Ireland	150	470	-	-
	Canada - Ontario	-	10	-	-
	Canada - Ontario	50	155	-	-
	Australia	-	10	-	-
	Australia	150	474	-	-
Glycerol 56-81-5	USA - OSHA	-	15	-	-
	South Korea	-	10	-	-
	Ireland	-	10	-	-
	Germany (DFG)	-	50	-	100
	Belgium	-	10	-	-
	Australia	-	10	-	-
Urea 57-13-6	Latvia	-	10	-	-

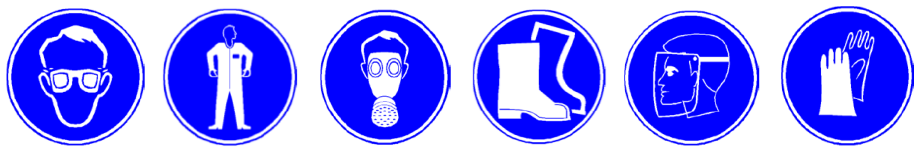
◆ Biological limit values

Biological limit values	No information available
◆ Monitoring methods	
1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air(Series standard).

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US)).
Hand protection	Wear protective gloves (such as butyl rubber), passing the tests according to EN 374(EU), US F739 or AS/NZS 2161.1 standard.
Respiratory protection	If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.
Skin and body protection	Wear fire/flame resistant/retardant clothing and antistatic boots.

9 Physical and chemical properties

Physical and chemical properties

Appearance	Colorless transparent liquid
Odor	No special odor
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	No information available
Initial boiling point and boiling range(°C)	>35
Flash point(Closed cup, °C)	The flash point above 93 °C
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit : 2.6-12.6 ; Lower limit : No information available
Vapor pressure	No information available
Relative vapour density(Air = 1)	No information available
Relative density(Water=1)	No information available
Solubility(mg/L)	No information available
n-octanol/water	No information available

partition coefficient	
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available
Particle characteristics	Not applicable

10 Stability and reactivity

| Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with oxidants, anhydrides, metals, metal oxides / KMnO4 metal salts, nitro-compounds may cause a fire or explosion.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Oxidants, alkali metals, alkaline earth metals and aluminum. Oxidants, halogen, anhydrides, acids, metals, metal oxides, potassium permanganate, nitro-compounds and metal salts.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

| Acute toxicity

Component	Cas No.	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
Glycerol	56-81-5	12600mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
Propane-1,2-diol	57-55-6	20000mg/kg(Rat)	20800mg/kg(Rabbit)	No information available
Urea	57-13-6	8471mg/kg(Rat)	No information available	No information available

| Carcinogenicity

ID	Cas No.	Component	IARC	NTP
1	57-55-6	Propane-1,2-diol	Not Listed	Not Listed
2	56-81-5	Glycerol	Not Listed	Not Listed
3	57-13-6	Urea	Not Listed	Not Listed
4	25322-68-3	Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	Not Listed	Not Listed

| Others

MDR-6	
Skin corrosion/irritation	No information available

Serious eye damage/irritation	No information available
Skin sensitization	No information available
Respiratory sensitization	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available
Germ cell mutagenicity	No information available
Reproductive toxicity(additional)	No information available

12 Ecological information

Acute aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Glycerol	56-81-5	LC ₅₀ : 68100mg/L (96h)(Fish)	No information available	No information available
Propane-1,2-diol	57-55-6	LC ₅₀ : 39800mg/L (96h)(Fish)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
Urea	57-13-6	LC ₅₀ : 99mg/L (96h)(Fish)	EC ₅₀ : 5240mg/L (48h)(Crustaceans)	No information available

Chronic aquatic toxicity

Component	Cas No.	Fish	Crustaceans	Algae
Propane-1,2-diol	57-55-6	NOEC : >100mg/L(Fish)	NOEC : 1000mg/L(Crustaceans)	NOEC : 1000mg/L(Algae)

Persistence and degradability

Component	Cas No.	Persistence (water/soil)	Persistence (air)
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	25322-68-3	Low	Low
Urea	57-13-6	Low	Low
Propane-1,2-diol	57-55-6	Low	Low

Bioaccumulative potential

Component	Cas No.	Bioaccumulative potential	comments
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	25322-68-3	Low	LogKOW=-1.1996
Urea	57-13-6	Low	BCF=10
Propane-1,2-diol	57-55-6	Low	BCF=1

Mobility in soil

Component	Cas No.	Mobility in soil	Soil Organic Carbon-Water
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			Partitioning Coefficient (Koc)
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	25322-68-3	High	1
Urea	57-13-6	Low	4.191
Propane-1,2-diol	57-55-6	High	1

Results of PBT and vPvB assessment

Component	Cas No.	Results of PBT and vPvB assessment (according to (EC) No 1907/2006)
Propane-1,2-diol	57-55-6	not PBT/vPvB
Glycerol	56-81-5	not PBT/vPvB
Urea	57-13-6	not PBT/vPvB
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	25322-68-3	not PBT/vPvB

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section 13.1and 13.2.

14 Transport information

Label and Mark

Transporting Label	Not applicable
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IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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ICAO/IATA-DG

ICAO/IATA-DG	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
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15 Regulatory information

International chemical inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Propane-1,2-diol	✓	✓	✓	✓	✓	✓	✓	✓	✓
Glycerol	✓	✓	✓	✓	✓	✓	✓	✓	✓
Urea	✓	✓	✓	✓	✓	✓	✓	✓	✓

Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy-Ethane-1,2-diol, ethoxylated	✓	✓	✓	✓	✓	✓	✓	✓	✓
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【EINECS】 European Inventory of Existing Commercial Chemical Substances

【TSCA】 United States Toxic Substances Control Act Inventory

【DSL】 Canadian Domestic Substances List

【IECSC】 China Inventory of Existing Chemical Substances

【NZIoC】 New Zealand Inventory of Chemicals

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances

【KECI】 Existing and Evaluated Chemical Substances

【AICS】 Australia Inventory of Chemical Substances

【ENCS】 Existing And New Chemical Substances

Note

"✓" Indicates that the substance included in the regulations

"x" That no data or included in the regulations

16 Others

Information on revision

Creation Date	2018/05/07
Revision Date	2018/05/07
Reason for revision	-

Reference

[1]IPCS:The International Chemical Safety Cards (ICSC) ,website: <http://www.ilo.org/dyn/icsc/showcard.home>.

[2]IARC , website: <http://www.iarc.fr/>.

[3]OECD: The Global Portal to Information on Chemical Substances, website:

http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en.

[4]CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.

[5]NLM:ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.

[6]EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.

[7]U.S. Department of Transportation:ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.

[8]Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

CAS –Chemical Abstracts Service

PC-STEL- Short term exposure limit

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC₅₀ - Lethal Concentration 50%

NOEC -No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

BCF - Bioconcentration factor (BCF)

IMDG-International Maritime Dangerous Goods

CMR - Carcinogens, mutagens or substances toxic to reproduction

PC-TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC –Predicted No Effect Concentration

LD₅₀ - Lethal Dose 50%

EC₅₀ - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA-International Civil Aviation Organization/International Air

Transportation Association

UN-The United Nations**ACGIH**-American Conference of Governmental Industrial Hygienists**NFPA**-National Fire Protection Association**OECD**-Organization for Economic Co-operation and Development

| Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 7th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user' s reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.