


Safety Data Sheet

I. Chemicals & Exhibitor Info

Product Information: Diethylene Glycol
Other Information: -
Suggested Use and Prohibitions: Desiccants, lubricant, dye leveler, solvent, unsaturated and polyols raw materials.
Manufacturer , Importer or Supplier Name, Addresses, Phone: China Man-Made Fiber Corporation Kaohsiung Plant No.8, Jingjian Road, Dashe Dist, Kaohsiung City, Taiwan Tel : (886)-7-3512161~ 9
Emergency Phone: (886)-7-3512161~ 9 Fax: (886)-7-3513035

II. Hazard Identification

Chemical Hazard Classification: Class 2 proliferative toxic substance, Class 1 specific target organ systematic toxicity - repeated exposure.
Labeled Contents:  Symbols: Warning sign: Danger Hazard Warning Information: suspected harm to fertility or the fetus. Causes damage to organs through prolonged or repeated exposure . Hazard Prevention Measures: If comes in contact with eyes, wash immediately with large amount of water and then seek medical care. Once clothes are contaminated, remove immediately and wash the skin with large amount of water. Avoid exposure to this substance – must follow special instructions for use.
Other Hazards: -

III. Composition / Information on Ingredients (Single)

English Name: Diethylene Glycol
Synonyms: Diglycol 、2,2'-dihydroxydiethyl ether 、DEG 、Digol ◦
Chemical Abstracts Number (CAS NO.): 111-46-6
Hazard Ingredient (%): 100

IV. First Aid Measures

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Emergency and First Aid Procedures: Inhalation: 1. Move from exposed area to fresh air area. 2. Seek medical attention immediately. Skin Contact: 1. Use gentle, warm water to wash for at least 15 minutes as soon as possible. Eye Contact: 1. Use gentle, warm water to wash the injured eye for 15 minutes as soon as possible. 2. If irritation persists, seek medical attention immediately. Swallowed: 1. Seek medical attention immediately.
Major Disease and Harm Effects:
First-Aid Personal Protection: Wear protection gloves to prevent contact with the contaminants.
Prompt to Doctor: IF swallowed, consider gastric lavage.

V. Fire Fighting Measure

Suitable Extinguishing Media: Dry Chemical, alcohol-resistant foam, carbon dioxide, polymer foam, water mist.
Special Exposure Hazards: -
Special Extinguishing Procedure: 1. Water is not suitable for extinguishing fire and will cause foaming. 2. Spraying water mist can absorb heat, cool containers and through these, protect the exposed substance.
Special Protection Equipment: Fire fighters must wear air respirator, protective gloves and fire-fighting outfits.

VI. Accidental Release Measures

Personal Protection: 1. Restrict personnel from entering the leaking area until completely cleaned. 2. Make sure that only trained personnel are allowed to clean up. 3. Wear appropriate personal protection equipment.
Environmental Protection: 1. Ventilate and change the air in the leakage area. 2. Remove all ignition sources. 3. Notify the relevant government safety, hygiene and environmental protection agencies.
Methods for Cleaning Up: 1. Do not touch the leaking substance.

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2. Prevent the spilled substances from entering the drainage, canals or closed spaces.
3. If safety permits, try to stop or reduce the spillage.
4. Surround the leakage with sand, soil or other adsorbing substances that will not react with the leaking substance.
5. For small spillage, absorb using inert absorption materials. Place in properly covered containers and use water to wash the spilled area.
6. For large amount of spillage, use sand, soil or inert absorption materials to surround the spilled substance before sucking the liquid into the proper containers.

VII. Handling and Storage

Handling:

1. The storage area must be installed with the proper protective equipment. The work personnel must be properly trained and notified of the danger and safe usage of this substance.
2. If this substance is released in the storage site, immediately wear the respirator and perform the proper disposal.
3. Before operation, check if the container is leaking. Consider using a closed system to operate this substance.
4. Avoid producing steam and dewdrops. Also prevent the steam and dewdrops from entering the air in the work area.
5. The specific gravity of steam is greater than air, will accumulate in low-lying, enclosed areas, storage areas or poor ventilation areas.
6. The personnel should be positioned at upwind position for all opening, reversal and mixing operations.
7. Do not store contaminated liquid back into the original storage container.

Storage:

1. Stay far away from heat sources and incompatible substances during storage and operation in order to avoid producing toxic heat decompositions or violent reactions.
2. Empty vessels, containers and pipes may still contain hazardous residues. Clean properly before soldering, cutting, drilling or heating.
3. Apply minimum amount for operation in specified area with excellent ventilation and separate from the storage area.
4. Do not use with incompatible substances (such as strong oxidizer) as it will cause violent reactions.

VIII. Exposure Control / Personal Protection

Engineering Control:

1. Overall gas exchange installation.

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<p>2. Local exhaust ventilation system may be required during heating and formation of dewdrops.</p> <p>3. Provide sufficient fresh air supply to supplement the air discharged by the exhaust ventilation system.</p>			
Control Factor			
TWA	STEL	CEILING	BEIS
—	—	—	—
<p>Personal Protection Equipment:</p> <p>Respiratory Protection: No special requirements.</p> <p>Hand Protection: Leak-proof gloves made of natural rubber, neoprene rubber, polyvinyl chloride, butyl rubber, Viton, Teflon, Saranex, Barricade, 4H, Terllchem HPS, polyvinyl and nitrile rubber.</p> <p>Eye Protection: Chemical safety goggles and masks.</p> <p>Skin & Body Protection: Above-mentioned whole-body protective outfit, work pants, apron and work boots made of rubber.</p>			
<p>Hygiene Procedures:</p> <ol style="list-style-type: none"> 1. After work, remove the contaminated clothes as quickly as possible. Throw away or wash clothes thoroughly before wearing again. Notify the laundry personnel of the danger of the contaminated clothes. 2. Smoking and eating are strictly prohibited in work areas. 3. Wash hands thoroughly after handling this substance. 4. Keep the work area clean. 			

IX. Physical and Chemical Properties / Characteristics

Appearance: Colorless moisture-absorbing liquid	Odor: Odorless r
Odor threshold: -	Melting point: -11 °C
pH value: —	Boiling Point / Boiling Range: 224~245 °C
Flammability: -	Flash Point: 124 °C
Decomposition Temperature: -	Test Method: Close Cup
Spontaneous Temperature: 224 °C	Exposure Limits: 2 % ~ 12.3 %
Vapor Pressure: —	Vapor Density: 3.66 (air = 1)
Specific Gravity: 1.118 @ 20 °C (water = 1)	Solubility: Can dissolve using any ratio
Log kow: —	Percent volatile: <0.001 (Butyl acetate = 1)

X. Stability and Reactivity

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Stability: Stable under normal conditions.
Special Conditions of Hazardous Reaction: -
Conditions to Avoid: -
Incompatibility: Strong oxidizer, strong acid, strong base, sulfurized phosphorous acid.
Hazardous Decomposition Products: -

XI. Toxicological Information

Exposure route: skin contact, inhalation, ingestion, eye contact.
Symptoms: Poisoning, headache, vomiting, cyanosis, unconsciousness.
Acute Toxicity: Skin contact: 1. Liquid will cause irritation. Inhalation: Prolonged inhalation may irritate the throat and cause disorder of the nervous system. Swallowed: May induce symptoms of central nervous system suppression such as nausea, vomiting, lower abdominal pain, weakness, tiredness, dizziness, daze, convulsion and shock. Eye contact: 1. Liquid may cause irritation and eye infection. 2. Steam and condensation will irritate eyes. LD50 (test animal, absorption route): 12000 mg/kg (Rat, swallowed) 11.89 g/kg (Rabbit, Skin contact) LC50 (test animal, absorption route): -
Chronic: 1. Prolonged exposure to steam may cause unconsciousness and trembling of the eyeballs. 2. Prolonged inhalation may irritate the throat and cause disorder of the nervous system.

XII. Ecological Information

Eco-toxicity: LC50 (Fish): 75200 mg/l/96H EC50 (aquatic invertebrates): 84000 mg/l/48H Bio-concentration Factor (BCF):3
Durability and Degradability: -
Biological Accumulation: No possibility of food chain condensation.
Fluidity in soil: -
Other adverse effects: -

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XIII. Disposal Information

Disposal Information: <ol style="list-style-type: none">1. Dispose according to the waste substance clearing laws and regulations.2. Follow the warehouse conditions in storing waste substances waiting for disposal.3. Dispose according to special incinerating or hygienic landfill laws.
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XIV. Transport Information

The United Nations Number (UN No.):-
UN Transport Name: Diethylene Glycol
Transport Hazard Classification: -
Packaging Category:-
Marine Pollutant (Yes/No): NO
Special Transport Way and Note: -

XV. Regulation Information

Apply Regulation: <ol style="list-style-type: none">1. Occupation Safety and Sanitation Rules.2. Regulations of Hazard Communication on Dangerous and Harmful Material.3. Traffic Safety Regulations.4. Standards for the Storage, Clearance, and Disposal of Industrial Waste.5. Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations.

XVI. Other Information

Reference	1. Council of Labor Affairs, Executive Yuan, Taiwan, GHS in Taiwan website. http://ghs.cla.gov.tw/tw/ghs_main.asp	
Responsible Department	Name: China Man-Made Fiber Corporation Kaohsiung Plant Address: No.8, Jingjian Road, Dashe Dist, Kaohsiung City, Taiwan Tel: (886)-7-3512161~ 9	
Prepared by	Title: Vice Director	Name(Signature): Su Jeng Wen
Date	2022/5/20	
Note	The "-" symbol in the text above indicates that there is no current available data while the "/" symbol indicates that this field is not applicable to this substance.	

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Modify day	Edition	Update content decription
2019/8/1	1	First edition
2020/9/11	2	<p>1. Hazard Warning Information: Warning sign: Dangerous Modify” Warning sign: Danger” May be harmful if ingested. Modify” May be harmful if swallowed” Causes eye irritation. Modify” Causes serious eye irritation” Prolonged or repeated exposure will cause organ damage Modify” Causes damage to organs through prolonged or repeated exposure”</p> <p>2. IV. First Aid Measures Ingestion: Modify” Swallowed”</p> <p>3.XI. Toxicological Information Ingestion: Modify” Swallowed”</p>
2022/5/20	3	<p>1. II. Hazard Identification Chemical Hazard Classification:</p> <p>Class 5 acute toxic substance (ingestion),Class 2 serious eye injury/irritation substance, Class 1 specific target organ systematic toxicity - repeated exposure.</p>

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Modify” Class 2 proliferative toxic substance, Class 1 specific target organ systematic toxicity - repeated exposure.”

Labeled Contents:

Symbols:



DELETED” Symbols:



Hazard Warning Information:

May be harmful if swallowed.

Causes serious eye irritation.

Modify”suspected harm to fertility or the fetus”

2. IV. First Aid Measures

Skin Contact:

1. Use gentle, warm water to wash for at least 10 minutes as soon as possible.

Modify” 1. Use gentle, warm water to wash for at least 15 minutes as soon as possible.”

Eye Contact:

1. Use gentle, warm water to wash the injured eye for 20

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		<p>minutes as soon as possible.</p> <p>Modify” 1. Use gentle, warm water to wash the injured eye for 15 minutes as soon as possible.</p> <p>DELTED Swallowed: “1. Let the patient drink 240 to 300 ml of water to dilute the substance in the stomach.”</p> <p>DELTED Major Disease and Harm Effects: “1. Delayed toxic - ingestion will cause fatal damages to the kidneys. 2. Ingestion, inhalation and contact will cause medium degree poisoning.”</p> <p>Prompt to Doctor: - Modify” Prompt to Doctor: IF swallowed, consider gastric lavage.”</p> <p>3. IX. Physical and Chemical Properties / Characteristics</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Appearance: Colorless moisture-absorbing liquid</td> <td style="width: 50%;">Odor: Sweet odor</td> </tr> <tr> <td>Odor threshold: -</td> <td>Melting point: -</td> </tr> <tr> <td>pH value: 7~8</td> <td>Boiling Point / Boiling Range: 244~245 °C</td> </tr> <tr> <td>Flammability: -</td> <td>Flash Point: 120 °C</td> </tr> <tr> <td>Decomposition Temperature: -</td> <td>Test Method: Close Cup</td> </tr> <tr> <td>Spontaneous Temperature: 224 °C</td> <td>Exposure Limits: 1.6 % ~ 10.8 %</td> </tr> <tr> <td>Vapor Pressure: < 0.0013 Kpa @ 20 °C</td> <td>Vapor Density: 3.66 (air = 1)</td> </tr> <tr> <td>Specific Gravity: 1.118 @ 20 °C</td> <td>Solubility: Can dissolve</td> </tr> </table>	Appearance: Colorless moisture-absorbing liquid	Odor: Sweet odor	Odor threshold: -	Melting point: -	pH value: 7~8	Boiling Point / Boiling Range: 244~245 °C	Flammability: -	Flash Point: 120 °C	Decomposition Temperature: -	Test Method: Close Cup	Spontaneous Temperature: 224 °C	Exposure Limits: 1.6 % ~ 10.8 %	Vapor Pressure: < 0.0013 Kpa @ 20 °C	Vapor Density: 3.66 (air = 1)	Specific Gravity: 1.118 @ 20 °C	Solubility: Can dissolve
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		(water = 1)	using any ratio
		Log kow: -1.98	Percent volatile: -
Modify”			
		Appearance: Colorless moisture-absorbing liquid	Odor: Odorless
		Odor threshold: -	Melting point: -11 °C
		pH value: —	Boiling Point / Boiling Range: 224~245 °C
		Flammability: -	Flash Point: 124 °C
		Decomposition Temperature: -	Test Method: Close Cup
		Spontaneous Temperature: 224 °C	Exposure Limits: 2 % ~ 12.3 %
		Vapor Pressure: —	Vapor Density: 3.66 (air = 1)
		Specific Gravity: 1.118 @ 20 °C (water = 1)	Solubility: Can dissolve using any ratio
		Log kow: —	Percent volatile: <0.001 (Butyl acetate = 1)
<p>4. XI. Toxicological Information</p> <p>DELTED Skin contact:</p> <p style="padding-left: 40px;">“2. Skin will absorb immediately and cause poisoning.”</p> <p>LD50 (test animal, absorption route): 12565 mg/kg (Rat, ingestion) 11.89 g/kg (Mouse, Skin contact)</p> <p>Modify” LD50 (test animal, absorption route): 12000 mg/kg (Rat,</p>			

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		swallowed) 11.89 g/kg (Rabbit, Skin contact)” 5. XII. Ecological Information Eco-toxicity: LC50 (Fish): 5000 mg/l/24H EC50 (aquatic invertebrates): 0.3~1.0 mg/l/48H Bio-concentration Factor (BCF): - Modify” LC50 (Fish): 75200 mg/l/96H EC50 (aquatic invertebrates): 84000mg/l/48H Bio-concentration Factor (BCF): 3