



Material Safety Data Sheet

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Section 1 - Product and Company Identification

Product name : Diethylene glycol monobutyl ether
Other names : --
Product use : Use as Solvent and resin intermediate
Supplier's name : San Fu Chemical Co., Ltd., Shan Hua Plant
Supplier's address : 340 Hsiao Hsin Li, Shan Hua Town, Tainan Hsien, Taiwan, R.O.C.
Supplier's phone : 06-5837608 Emergency phone : 06-5837608
FAX. : 06-5839498

Section 2 - Hazards Identification

Classification :
1. Flammable Liquids Category 4
2. Skin Corrosion/Irritation Category 3
3. Sever Eye Damage/Irritation Category 2B
The Most Important Hazards and effect
Label element :
■ Hazard symbol : none
■ Signal word : Warning
Hazard statement :
1. Combustible liquid
2. Cause mild skin irritation
3. Cause eye irritation
Precautionary statement :
1. Keep container tightly closed.
2. Keep container in a well-ventilated place.
3. Keep away from combustible material.
4. Wear proper protective clothing
5. If contact with eyes, flush with large amount of water immediately and seek the medical attention.
Others Hazard : /

Section 3 - Composition/Information On Ingredients

Pure Substance :

Chemical name : Diethylene glycol monobutyl ether for synthesis 、 Diethylene glycol monobutyl ether 、 2-(2-Butoxyethoxy)ethanol 、 Bucb 、 Butoxydiethylene glycol 、 Butoxydiglycol 、 Butyl carbitol 、 Butyl dioxitol 、 Diethylene glycol monobutyl ether 、 Diethylene glycol N-butyl ether 、 Diglycol monobutyl ether 、 o-Butyl diethylene glycol
Synonyms : 2-(2-BUTOXYETHOXY)ETHANOL 、 BUTYL CARBITOL
CAS No. : 112-34-5
Ingredient contributing to the hazard(%) : 100%



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Section 4 - First Aid Measures

The First-aid Information : <ul style="list-style-type: none">■ Inhalation : Remove the contaminated origin or move the patient to an air-circulated place. Seek medical attention immediately.■ Skin Contact : Remove the contaminated clothes and shoes. Immediately wash the injured skin with water and shop above 15 minutes. Seek medical attention immediately.■ Eye Contact : Immediately flush the contaminated eyes with water above 15 minutes. Seek medical attention immediately.■ Ingestion : Give large amount of water to induce vomiting. Seek medical attention immediately.
The Most Important Symptoms and Hazardous Effects : --
Protection of First-aiders : Show the contacted chemical to the health care workers, and choose the suitable personal protective apparatus.
Notes to a Physician : Induce vomit

Section 5 - Fire Fighting Measures

Extinguishing Media : Water, CO ₂ , chemical powder, foam
Specific Hazards when Fire-fight : <ol style="list-style-type: none">1. Combustible with open flame and heat.2. May react with oxidizers.3. The vapor is heavier than air and may spread far in the lower place. Once the substance meet the source of fire, may cause tempering.4. May be exploded and broken if incase of high temperature by increasing of the pressure in the container.
Specific Fire-fighting Procedure : --
Specific Protection of Firefighters : Fireman must wear full chemical protective clothing and self-contained breathing apparatus (SCBA). (wear aluminum mirage protecting coat if necessary)

Section 6 - Accidental Release Measures

Personal Precautions : Avoid contact.
Environmental Precautions : <ol style="list-style-type: none">1. Try to block the source of leakage.2. Avoid empty to the limited space such as drain and sewer.3. Evacuate the personnel from the contaminated area to safety place and processing the separation. Restrict access the area.4. Block the source of fire
Methods for Cleaning up : <ol style="list-style-type: none">1. Wash the contaminated materials and area.2. Use liquid as the absorbent to absorb the contaminated material.3. Small spill: Use the sand, Vermiculite or other inert material to absorb the leakage.4. Large spill: Collected by embanking surrounds or digging. Use pump to transfer waste disposal to the tank or specific collector for recycle or manage by disposal sites.



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Section 7 - Handling and Storage

Handling : <ol style="list-style-type: none"> 1. Operating closely with local ventilation. 2. Avoid the vapor spill to the air of the working area. 3. Operator should undergone the professional training, restrict follow the operating regulation. 4. Away from ignition, source of fire. Strictly no smoking in the working area. 5. Use the explosive preventing style of ventilation system and equipments. 6. Avoid producing smoke 7. Avoid contacting with oxidizers.
Storage : <ol style="list-style-type: none"> 1. Store in a cool, dry, well ventilated storage room. 2. Away from heat and ignition. 3. Avoid direct to sunlight 4. Keep container tightly closed. 5. Separately store with oxidizers. Avoid store together. 6. Should have the leaking emergency equipments and appropriated collecting material in the storage area.

Section 8 - Exposure Controls & Personal Protection

Engineering measures : Operating closely with local ventilation.			
Control parameters			
TWA	STEL	Ceiling	Biological standards
--	--	--	--
Personal protective equipment : <ul style="list-style-type: none"> ■ Respiratory Protection : While the concentration in the air is over the standards personnel must wear NIOSH approved half-face piece self-contained breathing apparatus and positive pressure demand. During rescue or evacuating, should wear respirator. ■ Hand Protection : Use the impervious gloves made of Butyl rubber, Polyethylene, chloroprene rubber, PVC. ■ Eye Protection : Chemical protective goggle, face shield ■ Skin and Body Protection : Wear protective clothing, Overalls, working boots made by rubber materials mention above. 			
Hygiene measures : <ol style="list-style-type: none"> 1. Strictly no smoking and eating in the working area. Wash hands before drinking and eating. 2. Show and change clothes after work. 3. Keep good hygiene. 			

Section 9 - Physical & Chemical Properties

Appearance : colorless, liquid	Odor : enjoyable flavor
Color : Transparent	Melting Point: -68°C
pH value : --	Boiling point/boiling range : 226-234°C (1013hPa)
Flammability: --	Flash point : 77.8°C
Decomposition temp : --	Test method : closed cup



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Auto ignition temp : 225 °C	Explosion properties : 0.85% -24.6%
Vapor pressure : 0.01mmHg@20°C	Vapor density : 5.6(Air = 1)
Density : 0.9553	Solubility : soluble
log Kow : 0.15-1.0	Evaporation Rate : --

Section 10 - Stability & Reactivity Data

Stability : Stable
Possible hazardous reactions under specific conditions : --
Conditions to avoid : Heating
Materials to avoid : Air, oxidizer
Hazardous decomposition products : CO, CO ₂

Section 11 - Toxicological Information

Route of exposure : Skin, inhalation, ingestion, eyes
Symptoms : Irritation, dizziness, nausea, vomit
Immediate Toxicity : 1. Skin : Cause mild skin irritation and allergic dermatitis. Will absorb by skin with large contact. 2. Inhalation : -- 3. Eye : Eye irritation 4. Ingestion : -- <ul style="list-style-type: none">● LD₅₀: 5660 mg/kg (rat , oral)● LC₅₀: --
Specific effects : --

Section 12 - Ecological Information

Ecotoxicology : -- <ul style="list-style-type: none">■ LC₅₀(fish) : --■ EC₅₀(Aquatic Invertebrates) : --■ Bioconcentration factor (BCF) : --
Persistence and degradability : -- <ul style="list-style-type: none">■ Half-Life (Air) : --■ Half-Life (Water surface) : --■ Half-Life (Groundwater) : --■ Half-Life (Soil) : --
Bioaccumulative potential : --
Mobility in soil : --
Other adverse effects : This substance is harmful for the environment. Don't release to the environment; Take precautionary measures against water contamination.

Section 13 - Disposal Considerations



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Methods of disposal : Suggest managing by use of burning method or safety burry method.
Repeatedly use the containers in the utilizing place or bury in the regulating place.

Section 14 - MSDS Transport Information

UN classification number : --
Proper D.O.T Shipping Name : --
Hazard Class : --
Packing Group : --
Marine pollution : --
Specific precautionary transport measures and conditions : <ol style="list-style-type: none">1. Check the completion of the packaging and sealing. Ensure no leaking, no collapsing, not falling, no damaging of the container in the process of transport.2. Strictly no packing and transporting together with oxidizers and food chemicals.3. Transportations must be washed and disinfected completely before transfer the other materials.4. During shipping, the loading position of the material must be far away from living room, kitchen. Be separated with cabin, Power supply and source of fire.5. Roadway transporting must follow the regulating pathway.

Section 15 - Regulatory Information

Regulations :
<ol style="list-style-type: none">1. Regulations for Labor Safety and Health Installations2. Regulations for Chemical Hazard Communication3. Organic Solvent Poisoning Prevention Regulations4. Permissible Exposure Limits of Hazardous Substances in the Work Environment5. Road Traffic Safety Regulations6. Industrial Waste Storage and Disposal Regulations and Facility Standards7. Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations.

Section 16 - Other Information

Literature references	<ol style="list-style-type: none">1. CHEMINFO Database , CCINFO Disc , 2005-32. HAZARDTEXT Database , TOMES PLUS Disc , Vol.65 , 20053. RTECS Database , TOMES PLUS Disc , Vol.65 , 20054. HSDB Database , TOMES PLUS Disc , Vol.65 , 20055. Hazardous Chemical Chinese Database, EPA6. ChemWatch Database , 2005-1		
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Remarks	Symbols Explanations: "--" No information is available at this time. "/" Not applicable to this substance.
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