

# GHS Safety Data Sheet

## E-5632

Issue Date : 2022.01.01 / SDS No. : TFCEN20227002

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Product Details

Product name : E-5632  
Other name : Ethylene glycol monobutyl ether  
Recommended use of the chemical and restrictions on use : Electro-coating solvent

#### Manufacturer or Supplier's Details

Name of manufacturer : Tatung Fine Chemicals Corporation  
Address : 247-1, 16 Ling, Caota, Guanyin Dist., Taoyuan City, Taiwan, R.O.C.  
Telephone / FAX No. : +886-3-483-0321 / +886-3-483-8381  
Emergency telephone No. : +886-3-483-0321 # 237

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

Flammable liquids : Category 4, H227  
Acute toxicity, oral : Category 4, H302  
Acute toxicity, dermal : Category 4, H312  
Acute toxicity, inhalation : Category 4, H332  
Skin corrosion / irritation : Category 2, H315  
Serious eye damage / eye irritation : Category 2A, H319

#### GHS Label Elements

Hazard symbols :



Signal word : **WARNING !**

Hazard statements H227 : Combustible liquid.  
H302 : Harmful if swallowed.  
H312 : Harmful in contact with skin.  
H315 : Causes skin irritation.  
H319 : Causes serious eye irritation.  
H332 : Harmful if inhaled.

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### Precautionary Statements

Prevention	P210	: Keep away from heat / sparks / open flames / hot surfaces. - No smoking.
	P261	: Avoid breathing dust / fume / gas / mist / vapors / spray.
	P264	: Wash thoroughly after handling.
	P270	: Do not eat, drink or smoke when using this product.
	P271	: Use only outdoors or in a well-ventilated area.
	P280	: Wear protective gloves / protective clothing / eye protection / face protection.
	Response	P301 + P312
P302 + P352		: IF ON SKIN: Wash with plenty of soap and water.
P304 + P340		: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338		: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312		: Call a POISON CENTER or doctor/physician if you feel unwell.
P330		: Rinse mouth.
P332 + P313		: If skin irritation occurs: Get medical advice / attention.
P337 + P313		: If eye irritation persists: Get medical advice / attention.
P362 + P364		: Take off contaminated clothing and wash before reuse.
P370 + P378		: In case of fire, use dry powder, foam, carbon dioxide fire extinguishers for extinction.
Storage	P403 + P235	: Store in a well-ventilated place. Keep cool.
Disposal	P501	: Dispose of contents / container to appropriate waste site or reclaimer in accordance with local or national regulations.

Other Hazards : None.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance:

Components	Percentage (%)	CAS No.
Ethylene glycol monobutyl ether	> 99.0%	111-76-2

### 4. FIRST AID MEASURES

**First Aid Measures for Different Ways of Exposure**

- After inhalation : Move person to fresh air; if effects occur, consult a physician.
- After skin contact : Wash off with plenty of water. Suitable emergency safety shower facility should be available in work area.
- After eye contact : Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.
- After ingestion : Do not induce vomiting. Seek medical attention immediately.

**The Most Important Symptom and Harmful Effect**

- : Aside from the information found under Description of first aid measures (above) and indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology information.

**Protection for First Aid Personnel**

- : None.

**Advice to Doctor**

- : Due to structural analogy and clinical data, this material may have a mechanism of intoxication similar to ethylene glycol. On that basis, treatment similar to ethylene glycol intoxication may be benefit.
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**5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media**

- : Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam fire extinguishers.

**Special Risks**

- : During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and / or irritating. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide. Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

**Special Procedure**

- : Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize
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property damage.

**Protective Equipment** : Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location.

## 6. ACCIDENTAL RELEASE MEASURES

**Person-related Safety Precautions** : Isolate area. Keep unnecessary and unprotected personnel from entering the area. No smoking in area.

**Measures for Environment Protection** : Prevent from entering into soil, ditches, sewers, waterways and / or groundwater.

### **Measures for Cleaning**

Small spills : Absorb with materials such as: Non-combustible material. Clay. Zorb-all®.

Large spills : Contain spilled material if possible. Dike area to contain spill. Collect in suitable and properly labeled containers.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** : Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

**Storage** : Store in cool place, avoid from direct sunlight, rain and rapid changes of temperature. Store in non-smoking area. Store inside qualified container.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### **Control Parameters**

Components	ACGIH TWA	TW OEL STEL	CEILING	ACGIH BEIs
Ethylene glycol monobutyl ether	20ppm	37.5ppm	None	End of shift. 200 mg/g Creatinine.

**Engineering Control** : Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or

guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

#### **Personal Protective Equipment**

- Respiratory protection : For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.
- Eye protection : Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.
- Hand protection : Use gloves chemically resistant to this material. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile / butadiene rubber ("NBR"). Polyvinyl chloride ("PVC").
- Skin / body protection : Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

- Hygiene Measures** : No smoking and drinking.
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## **9. PHYSICAL AND CHEMICAL PROPERTIES**

- Form : Colorless liquid.
- Odor : Mild.
- Odor threshold : None.
- pH : None.
- Melting point / range : Not applicable.
- Boiling point / range : 171°C
- Flammability (solid, gas) : Not applicable.
- Decomposition temperature : None.
- Flash point : 67°C (Close cup)
- Self-inflammability : 230°C
- Upper / lower explosion limits : 10.6%vol / 1.3%vol
- Vapor pressure : 0.87mmHg (20°C)
- Vapor density (air=1) : Not applicable.
- Density (water=1) : 0.9005~0.9040 (20°C)
- Solubility (water) : 100% (20°C)
- Octanol-water partition coefficient (log Kow) : 0.81
- Evaporation rate (nBAc=1) : 0.06
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## 10. STABILITY AND REACTIVITY

- Stability** : Thermally stable at typical use temperatures.
- Possibility of Hazardous reaction** : Polymerization will not occur.
- Conditions to Avoid** : Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.
- Incompatible Materials** : Strong acids, Strong oxidizers.
- Hazardous Decomposition Products** : Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Aldehydes. Ketones. Organic acids.

## 11. TOXICOLOGICAL INFORMATION

**Route of Exposure** : Inhalation, skin, eye, ingestion.

### **Symptoms**

- Inhalation** : Excessive exposure may cause irritation to upper respiratory tract(nose and throat). In humans symptoms may include: Headache.
- Skin** : Brief contact may cause slight skin irritation with local redness. Repeated exposure may cause irritation, even a burn. May cause more severe response on covered skin (under clothing, gloves).
- Eye** : May cause severe eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness.
- Ingestion** : Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Massive ingestion of ethylene glycol monobutyl ether may produce metabolic acidosis and subsequent secondary effects such as hemolysis, central nervous system and kidney effects.

### **Acute Toxicity**

Components	Oral (LD <sub>50</sub> )	Dermal (LD <sub>50</sub> )	Inhalation (LC <sub>50</sub> )
Ethylene glycol monobutyl ether	1300 mg/kg Rat	>2000 mg/kg Guinea pig	486 ppm Rat

**Chronic Toxicity or Long Term Toxicity** : None.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Components	Fish (LC <sub>50</sub> )	Aquatic invertebrates (EC <sub>50</sub> )	Algae (EC <sub>50</sub> )	Bacteria (IC <sub>50</sub> )
Ethylene glycol monobutyl ether	1464 mg/L /96h Rainbow trout	1550 mg/L /48h Water flea	911 mg/L /72h Green algae	> 1000 mg/L.

**Persistence and Degradability** : Material is readily biodegradable.

**Bioaccumulative Potential** : Bioconcentration potential is low.

**Mobility in Soil** : Potential for mobility in soil is high.

**Special Effect** : None.

## 13. DISPOSAL CONSIDERATIONS

**Waste Disposal of Substance** : Dispose of in accordance with national, state and local regulations.

**Contaminated Packaging** : Empty containers should be recycled or disposed through an approved waste management facility or licensed contractor.

## 14. TRANSPORT INFORMATION

### Land Transport (ADR / DOT / RID)

UN number : Not classified as a dangerous good under transport regulations.

Proper shipping name : Not classified as a dangerous good under transport regulations.

Class : Not classified as a dangerous good under transport regulations.

Packing group : Not classified as a dangerous good under transport regulations.

### Sea Transport (IMDG)

UN number : Not classified as a dangerous good under transport regulations.

Proper shipping name : Not classified as a dangerous good under transport regulations.

Class : Not classified as a dangerous good under transport regulations.

Packing group : Not classified as a dangerous good under transport regulations.

Marine Pollutant : No.

### Air Transport (IATA / ICAO)

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Class : Not classified as a dangerous good under transport regulations.  
Packing group : Not classified as a dangerous good under transport regulations.

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### 15. REGULATORY INFORMATION

TSCA : United States Toxic Substances Control Act Section 8(b) Inventory.  
EINECS / ELINCSL : European Inventory of Existing Chemical Substances / European List of Notified Chemical Substances.  
IECSC : China Inventory of Existing Chemical Substances.  
TCSI : Taiwan Chemical Substance Inventory.

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### 16. OTHER INFORMATION

**References** : Globally Harmonized System of Classification and Labelling of Chemicals. (GHS)  
Recommendations on the Transport Of Dangerous Goods - Model Regulations. (TDG)  
GHS Safety Data Sheet of Butyl CELLOSOLVE™ Solvent by DOW CHEMICAL TAIWAN LIMITED.

**Issued Company** : Tatung Fine Chemicals Corporation  
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