

# GHS Safety Data Sheet

## E-5431

Issue Date : 2022.01.01 / SDS No. : TFCEN20227001

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### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Product Details

Product name : E-5431  
Other name : Ethylene glycol monoethyl 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 3, H311  
Skin corrosion / irritation : Category 1B, H314  
Serious eye damage / eye irritation : Category 1, H318

#### GHS Label Elements

Hazard symbols :



Signal word : **DANGER !**

Hazard statements H227 : Combustible liquid.  
H302 : Harmful if swallowed.  
H311 : Toxic in contact with skin.  
H314 : Causes severe skin burns and eye damage.  
H318 : Causes serious eye damage.

#### Precautionary Statements

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- Prevention
- P210 : Keep away from heat / sparks / open flames / hot surfaces. - No smoking.
  - P260 : Do not breathe dust / fume / gas / mist / vapours / 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 : IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
  - P301 + P330 + P331 : IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
  - P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
  - P303 + P361 + P353 : IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
  - 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.
  - P310 : Immediately call a POISON CENTER or doctor / physician.
  - P312 : Call a POISON CENTER or doctor / physician if you feel unwell.
  - P330 : Rinse mouth.
  - P361 + P364 : Remove / Take off immediately all contaminated clothing and wash before reuse.
  - P363 : Wash contaminated clothing before reuse.
  - P370 + P378 : In case of fire, use dry powder, foam, carbon dioxide fire extinguishers for extinction. - Water may increase the risk.
- Storage
- P403 + P235 : Store in a well-ventilated place. Keep cool.
  - P405 : Store locked up.
- 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 monohexyl ether | > 98.0%        | 112-25-4 |

#### 4. FIRST AID MEASURES

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

- After inhalation : Move person to fresh air and keep comfortable for breathing; consult a physician.
- After skin contact : Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical consultation is essential. Wash clothing before reuse. Properly dispose of leather items such as shoes, belts, and watchbands. Suitable emergency safety shower facility should be immediately available.
- 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. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth unless the person is fully conscious.

##### 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

- : If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns and/or ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal or esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.
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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
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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 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.

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## 6. ACCIDENTAL RELEASE MEASURES

**Person-related Safety Precautions** : Evacuate area. No smoking in area. Only trained and properly protected personnel must be involved in clean-up operations.

**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: Sand. Vermiculite. Collect in suitable and properly labeled containers.

Large spills : Contain spilled material if possible. Pump into suitable and properly labeled containers.

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## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** : Do not swallow. Do not get on skin or clothing. Avoid contact with eyes. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Keep away from heat, sparks and flame. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.

**Storage** : Store in cool place, avoid from direct sunlight, rain and rapid changes of temperature.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Control Parameters

| Components                         | ACGIH<br>TWA | TW OEL<br>STEL | CEILING | ACGIH<br>BEIs |
|------------------------------------|--------------|----------------|---------|---------------|
| Ethylene glycol<br>monoethyl ether | 20ppm        | None           | None    | None          |

**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 : Pungent.

Odor threshold : None.

pH : None.

Melting point / range : Not applicable.

Boiling point / range : 208.5°C

Flammability (solid, gas) : Not applicable.

Decomposition temperature : None.

Flash point : 91.5°C (Close cup)

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|                                               |                     |
|-----------------------------------------------|---------------------|
| Self-inflammability                           | : 225°C             |
| Upper / lower explosion limits                | : 9.0%vol / 1.4%vol |
| Vapor pressure                                | : 0.075mmHg (20°C)  |
| Vapor density (air=1)                         | : 5 (20°C)          |
| Density (water=1)                             | : 0.889 (20°C)      |
| Solubility (water)                            | : 9.460g/L (20°C)   |
| Octanol-water partition coefficient (log Kow) | : 1.97              |
| Evaporation rate (nBAc=1)                     | : <0.01             |

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### 10. STABILITY AND REACTIVITY

|                                                 |                                                                                                                                                                                                 |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Stability</u></b>                         | : Thermally stable at typical use temperatures.                                                                                                                                                 |
| <b><u>Possibility of Hazardous reaction</u></b> | : Polymerization will not occur.                                                                                                                                                                |
| <b><u>Conditions to Avoid</u></b>               | : Do not distill to dryness. Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.                                         |
| <b><u>Incompatible Materials</u></b>            | : Strong acids. Strong oxidizers. Strong bases.                                                                                                                                                 |
| <b><u>Hazardous Decomposition Products</u></b>  | : 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. |

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### 11. TOXICOLOGICAL INFORMATION

|                                 |                                                                                                                                                                                                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><u>Route of Exposure</u></b> | : Inhalation, skin, eye, ingestion.                                                                                                                                                                |
| <b><u>Symptoms</u></b>          |                                                                                                                                                                                                    |
| Inhalation                      | : At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. For respiratory irritation and narcotic effects: No relevant data found. |
| Skin                            | : Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage. Classified as corrosive to the skin according to DOT guidelines.                          |
| Eye                             | : May cause severe eye irritation. May cause slight corneal injury.                                                                                                                                |
| Ingestion                       | : Low toxicity if swallowed. Swallowing may result in burns of the mouth and throat.                                                                                                               |
| <b><u>Acute Toxicity</u></b>    |                                                                                                                                                                                                    |

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| Components                      | Oral (LD <sub>50</sub> ) | Dermal (LD <sub>50</sub> ) | Inhalation (LC <sub>50</sub> ) |
|---------------------------------|--------------------------|----------------------------|--------------------------------|
| Ethylene glycol monohexyl ether | 738 mg/kg<br>Rat         | 757 mg/kg<br>Rabbit        | No data available              |

**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 monohexyl ether | 140 mg/L /96h<br>Fathead minnow | 145 mg/L /48h<br>Water flea               | 147 mg/L /96h<br>Green algae | > 750 mg/L /0.5h             |

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

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

**Mobility in Soil** : Potential for mobility in soil is very 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 : 2922  
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.  
Class : 8 (6.1)  
Packing group : II

### Sea Transport (IMDG)

UN number : 2922

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Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.  
Class : 8 (6.1)  
Packing group : II  
Marine Pollutant : No.

### Air Transport (IATA/ICAO)

UN number : 2922  
Proper shipping name : CORROSIVE LIQUID, TOXIC, N.O.S.  
Class : 8 (6.1)  
Packing group : II

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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 Hexyl CELLOSOLVE™ Solvent by DOW CHEMICAL TAIWAN LIMITED.

Issued Company : Tatung Fine Chemicals Corporation  
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