



# COPPER(II) TRIFLUOROMETHANESULFONATE

Safety Data Sheet CXC083

Date of issue: 08/16/2017 Version: 1.0

## SECTION 1: Identification

### 1.1. Product identifier

Product name : COPPER(II) TRIFLUOROMETHANESULFONATE  
 Product code : CXC083  
 Product form : Substance  
 Physical state : Solid  
 Formula : C<sub>2</sub>CuF<sub>6</sub>O<sub>6</sub>S<sub>2</sub>  
 Synonyms : COPPER TRIFLATE  
 TRIFLUOROMETHANESULFONIC ACID COPPER SALT  
 METHANESULFONIC ACID, TRIFLUORO-, COPPER(2+) SALT  
 Chemical family : METAL COMPOUND

### 1.2. Recommended use of the chemical and restrictions on use

Recommended use : Chemical intermediate  
 For research use only

### 1.3. Details of the supplier of the safety data sheet

#### GELEST, INC.

11 East Steel Road  
 Morrisville, PA 19067

#### USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

#### GHS-US classification

Skin corrosion/irritation Category 1C H314

Serious eye damage/eye irritation Category 1 H318

Full text of H statements : see section 16

### 2.2. Label elements

#### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger  
 Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage  
 H318 - Causes serious eye damage  
 Precautionary statements (GHS-US) : P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P260 - Do not breathe dust  
 P264 - Wash hands thoroughly after handling  
 P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting  
 P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. rinse skin with water/shower  
 P304+P340 - If inhaled: Remove person to fresh air and keep 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 doctor  
 P321 - Specific treatment (see first aid instructions on this label)  
 P363 - Wash contaminated clothing before reuse  
 P405 - Store locked up  
 P501 - Dispose of contents/container to licensed waste disposal facility.

### 2.3. Hazards not otherwise classified (HNOC)

No additional information available

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### 2.4. Unknown acute toxicity (GHS US)

No data available

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent  
Name : COPPER(II) TRIFLUOROMETHANESULFONATE  
CAS No : 34946-82-2

Name	Product identifier	%	GHS-US classification
Copper(II) trifluoromethanesulphonate	(CAS No) 34946-82-2	95 - 100	Skin Corr. 1C, H314 Eye Dam. 1, H318

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

### 4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : Causes (severe) skin burns.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : No information available.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.

Unsuitable extinguishing media : None known.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

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Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Material is hygroscopic, absorbing water on exposure to air.  
Precautions for safe handling : Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust.  
Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Store locked up.  
Incompatible materials : Oxidizing agent. Phosphates. Soluble carbonates. Sulfuric acid.  
Storage area : Store in a well-ventilated place. Store away from heat.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.  
Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.  
Hand protection : Neoprene or nitrile rubber gloves.  
Eye protection : Chemical goggles or face shield. Contact lenses should not be worn.  
Skin and body protection : Wear suitable protective clothing.  
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (teal cartridge) respirator.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Solid. Turns dark blue on hydration.  
Molecular mass : 361.68 g/mol  
Color : Pale blue.  
Odor : No data available  
Odor threshold : No data available  
Refractive index : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : > 400 °C (72-8°C-dehydrates)  
Freezing point : No data available  
Boiling point : No data available  
Flash point : No data available  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : No data available  
Relative vapor density at 20 °C : No data available  
Relative density : > 1  
Solubility : Soluble in water.  
Log Pow : No data available  
Log Kow : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosive properties : No data available

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Oxidizing properties : No data available  
Explosion limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable at room temperature.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Oxidizing agent. Phosphates. Soluble carbonates. Sulfuric acid.

### 10.6. Hazardous decomposition products

Copper oxide fumes. Organic acid and organic vapors.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified  
Skin corrosion/irritation : Causes severe skin burns and eye damage.  
Serious eye damage/irritation : Causes serious eye damage.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.  
Reproductive toxicity : Not classified  
Specific target organ toxicity – single exposure : Not classified  
Specific target organ toxicity – repeated exposure : Not classified  
Aspiration hazard : Not classified  
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.  
Symptoms/effects after skin contact : Causes (severe) skin burns.  
Symptoms/effects after eye contact : Causes serious eye damage.  
Symptoms/effects after ingestion : No information available.  
Reason for classification : Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.  
Effect on ozone layer : No additional information available  
Effect on the global warming : No known effects from this product.  
GWPmix comment : No known effects from this product.

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### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

- Sewage disposal recommendations : Do not dispose of waste into sewer.
- Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
- Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

- UN-No.(DOT) : 3261
- DOT NA no. : UN3261

#### 14.2. UN proper shipping name

- Transport document description : UN3261 Corrosive solid, acidic, organic, n.o.s. (COPPER(II) TRIFLUOROMETHANESULFONATE), 8, III
- Proper Shipping Name (DOT) : Corrosive solid, acidic, organic, n.o.s. (COPPER(II) TRIFLUOROMETHANESULFONATE)
- Class (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
- Packing group (DOT) : III - Minor Danger
- Hazard labels (DOT) : 8 - Corrosive



- DOT Packaging Non Bulk (49 CFR 173.xxx) : 213
- DOT Packaging Bulk (49 CFR 173.xxx) : 240
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
- DOT Symbols : G - Identifies PSN requiring a technical name

#### 14.3. Additional information

- Emergency Response Guide (ERG) Number : 154
- Other information : No supplementary information available.

#### Transport by sea

- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

#### Air transport

- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 25 kg
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 100 kg

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### COPPER(II) TRIFLUOROMETHANESULFONATE (34946-82-2)

TSCA Exemption/Exclusion

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

##### Copper(II) trifluoromethanesulphonate (34946-82-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

No additional information available

##### EU-Regulations

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### Copper(II) trifluoromethanesulphonate (34946-82-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

### Copper(II) trifluoromethanesulphonate (34946-82-2)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Full text of H-phrases::

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

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SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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