

## SAFETY DATA SHEET

Revision Date 24-December-2021

Revision Number 4

### 1. Identification

|                             |   |
|-----------------------------|---|
| <b>Product Name</b>         | <b>Ethanesulfonyl chloride</b>  |
| <b>Cat No. :</b>            | <b>AC215820000; AC215820025; AC215820050; AC215820500;<br/>AC215821000; AC215825000</b> |
| <b>CAS-No</b>               | 594-44-5  |
| <b>Synonyms</b>             | No information available  |
| <b>Recommended Use</b>      | Laboratory chemicals.   |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use.  |

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

##### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Manufacturer**  
Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

**Emergency Telephone Number** For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

|  |              |
|--|--------------|
| <b>Flammable liquids</b>                 | Category 4   |
| <b>Acute oral toxicity</b>               | Category 4   |
| <b>Acute Inhalation Toxicity</b>         | Category 3   |
| <b>Skin Corrosion/Irritation</b>         | Category 1 B |
| <b>Serious Eye Damage/Eye Irritation</b> | Category 1   |

#### Label Elements

##### **Signal Word**

Danger

##### **Hazard Statements**

Combustible liquid

Harmful if swallowed  
 Toxic if inhaled  
 Causes severe skin burns and eye damage



### Precautionary Statements

#### Prevention

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
 Do not breathe dust/fumes/gas/mist/vapours/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Wear protective gloves/protective clothing/eye protection/face protection

#### Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER/doctor  
 Rinse mouth  
 Do NOT induce vomiting  
 Wash contaminated clothing before reuse  
 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

#### Storage

Store in a well-ventilated place. Keep container tightly closed  
 Store locked up

#### Disposal

Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

| Component               | CAS-No   | Weight % |
|-------------------------|----------|----------|
| Ethanesulfonyl chloride | 594-44-5 | 98       |

## 4. First-aid measures

|  |   |
|--|---|
| <b>Eye Contact</b>                     | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.   |
| <b>Skin Contact</b>                    | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.  |
| <b>Inhalation</b>                      | Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Immediate medical attention is required.  |
| <b>Ingestion</b>                       | Do NOT induce vomiting. Call a physician immediately. Clean mouth with water.   |
| <b>Most important symptoms/effects</b> | Difficulty in breathing. Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe |

**Notes to Physician** damage to the delicate tissue and danger of perforation  
Treat symptomatically

## 5. Fire-fighting measures

|   |   |
|---|---|
| <b>Suitable Extinguishing Media</b>     | Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Chemical foam. Water mist may be used to cool closed containers. |
| <b>Unsuitable Extinguishing Media</b>   | No information available  |
| <b>Flash Point</b>                      | 83 °C / 181.4 °F  |
| <b>Method -</b>                         | No information available  |
| <b>Autoignition Temperature</b>         | No information available  |
| <b>Explosion Limits</b>                 |   |
| <b>Upper</b>                            | No data available   |
| <b>Lower</b>                            | No data available   |
| <b>Sensitivity to Mechanical Impact</b> | No information available  |
| <b>Sensitivity to Static Discharge</b>  | No information available  |

### Specific Hazards Arising from the Chemical

Combustible material. Containers may explode when heated.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Sulfur oxides. Hydrogen chloride gas.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
3

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Remove all sources of ignition. Take precautionary measures against static discharges.  
**Environmental Precautions** See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition.

## 7. Handling and storage

**Handling** Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Handle product only in closed system or provide appropriate exhaust ventilation. Keep away from open flames, hot surfaces and sources of ignition.

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame. Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Strong bases. Alcohols.

## 8. Exposure controls / personal protection

**Exposure Guidelines** This product does not contain any hazardous materials with occupational exposure limit established by the region specific regulatory bodies.

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

**Eye Protection** Goggles  
**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments         |
|----------------|-------------------|-----------------|------------------------|
| Natural rubber | See manufacturers | -               | Splash protection only |
| Butyl rubber   | recommendations   |                 |                        |
| Nitrile rubber |                   |                 |                        |
| Neoprene       |                   |                 |                        |
| PVC            |                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

### **Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143 Acid gases filter Type E Yellow conforming to EN14387

When RPE is used a face piece Fit Test should be conducted

### Environmental exposure controls

No information available.

### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 9. Physical and chemical properties

|   |                              |
|---|------------------------------|
| <b>Physical State</b>                         | Liquid                       |
| <b>Appearance</b>                             | Light brown                  |
| <b>Odor</b>                                   | No information available     |
| <b>Odor Threshold</b>                         | No information available     |
| <b>pH</b>                                     | No information available     |
| <b>Melting Point/Range</b>                    | No data available            |
| <b>Boiling Point/Range</b>                    | 177 °C / 350.6 °F @ 760 mmHg |
| <b>Flash Point</b>                            | 83 °C / 181.4 °F             |
| <b>Evaporation Rate</b>                       | No information available     |
| <b>Flammability (solid,gas)</b>               | Not applicable               |
| <b>Flammability or explosive limits</b>       |                              |
| <b>Upper</b>                                  | No data available            |
| <b>Lower</b>                                  | No data available            |
| <b>Vapor Pressure</b>                         | 13 mmHg @ 65 °C              |
| <b>Vapor Density</b>                          | 4.4                          |
| <b>Specific Gravity</b>                       | 1.350                        |
| <b>Solubility</b>                             | No information available     |
| <b>Partition coefficient; n-octanol/water</b> | No data available            |

|                           |                          |
|---------------------------|--------------------------|
| Autoignition Temperature  | No information available |
| Decomposition Temperature | No information available |
| Viscosity                 | 1.44 cSt at 20 °C        |
| Molecular Formula         | C2 H5 Cl O2 S            |
| Molecular Weight          | 128.57                   |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available   |
| <b>Stability</b>                        | Stable under normal conditions. Moisture sensitive.  |
| <b>Conditions to Avoid</b>              | Incompatible products. Exposure to moist air or water. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Strong bases, Alcohols  |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides, Hydrogen chloride gas                            |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.   |
| <b>Hazardous Reactions</b>              | None under normal processing.  |

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|                        |  |
|------------------------|--|
| <b>Irritation</b>      | No information available   |
| <b>Sensitization</b>   | No information available   |
| <b>Carcinogenicity</b> | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Component               | CAS-No   | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|-------------------------|----------|------------|------------|------------|------------|------------|
| Ethanesulfonyl chloride | 594-44-5 | Not listed | Not listed | Not listed | Not listed | Not listed |

|   |   |
|---|---|
| <b>Mutagenic Effects</b>                          | No information available  |
| <b>Reproductive Effects</b>                       | No information available.   |
| <b>Developmental Effects</b>                      | No information available.   |
| <b>Teratogenicity</b>                             | No information available.   |
| <b>STOT - single exposure</b>                     | None known  |
| <b>STOT - repeated exposure</b>                   | None known  |
| <b>Aspiration hazard</b>                          | No information available  |
| <b>Symptoms / effects, both acute and delayed</b> | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| <b>Endocrine Disruptor Information</b>            | No information available  |

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains.

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

**UN-No** UN3265  
**Hazard Class** 8  
**Packing Group** II

### TDG

**UN-No** UN3265  
**Hazard Class** 8  
**Packing Group** II

### IATA

**UN-No** UN2927  
**Proper Shipping Name** TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.\*  
**Hazard Class** 6.1  
**Subsidiary Hazard Class** 8  
**Packing Group** II

### IMDG/IMO

**UN-No** UN2927  
**Proper Shipping Name** Toxic liquid, corrosive, organic, n.o.s.  
**Hazard Class** 6.1  
**Subsidiary Hazard Class** 8  
**Packing Group** II

## 15. Regulatory information

### International Inventories

| Component               | CAS-No   | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|-------------------------|----------|-----|------|------|---|-----------|--------|-----|
| Ethanesulfonyl chloride | 594-44-5 | -   | X    | X    | ACTIVE  | 209-842-5 | -      | -   |

| Component               | CAS-No   | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|-------------------------|----------|-------|------|------|------|------|------|-------|-------|
| Ethanesulfonyl chloride | 594-44-5 | -     | -    | X    | X    | X    | -    | X     | X     |

#### Legend:

X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

#### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

#### Other International Regulations

#### Authorisation/Restrictions according to EU REACH

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component               | CAS-No   | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|-------------------------|----------|----------------|------------------------------|---------------------------|--|
| Ethanesulfonyl chloride | 594-44-5 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

| Component               | CAS-No   | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|-------------------------|----------|---|--|----------------------------|------------------------------------|
| Ethanesulfonyl chloride | 594-44-5 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

### 16. Other information

#### Prepared By

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#### Revision Date

24-December-2021

#### Print Date

24-December-2021

#### Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**