



## MATERIAL SAFETY DATA SHEET

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### Sulfuryl Chloride

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88448

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#### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**MSDS Name:** Sulfuryl Chloride

**Catalog Numbers:**

S/9560

**Synonyms:**

Sulfonyl Chloride; Sulfuric Oxychloride.

**Company Identification:** Fisher Scientific UK

Bishop Meadow Road  
Loughborough, Leicestershire  
LE11 5RG, UK

For information, call: 01509 231166

For emergencies, call: 01509 231166

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#### SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

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CAS#	:	7791-25-5
Chemical Name	:	Sulfuryl chloride
%	:	100
EINECS#	:	232-245-6
Haz Symbols	:	C
Risk Phrases	:	14 34 37

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#### SECTION 3 - HAZARDS IDENTIFICATION

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##### EMERGENCY OVERVIEW

Reacts violently with water. Causes burns. Irritating to respiratory system. Corrosive. Water-reactive.

##### Potential Health Effects

Eye:

Causes eye burns. When substance becomes wet or comes in contact with moisture of the mucous membranes, it will cause irritation. May cause chemical conjunctivitis and corneal damage.

Skin:

Causes skin burns. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause skin rash (in milder cases), and cold and clammy skin with cyanosis or pale color.

Ingestion:

May cause severe and permanent damage to the digestive tract. May cause perforation of the digestive tract. The toxicological properties of this substance have not been fully investigated. May

cause systemic effects.

Inhalation:

May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. Causes chemical burns to the respiratory tract. The toxicological properties of this substance have not been fully investigated. Aspiration may lead to pulmonary edema. May cause systemic effects.

Chronic:

Effects may be delayed.

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## SECTION 4 - FIRST AID MEASURES

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Eyes:

Get medical aid. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin:

Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes. If water-reactive products are embedded in the skin, no water should be applied. The embedded products should be covered with a light oil.

Ingestion:

Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

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## SECTION 5 - FIRE FIGHTING MEASURES

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General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Water Reactive. Material will react with water and may release a flammable and/or toxic gas. Use water spray to keep fire-exposed containers cool. Will react with water to form toxic and corrosive fumes. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May ignite or explode on contact with steam or moist air. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated.

Extinguishing Media:

Use dry sand or earth to smother fire. DO NOT USE WATER! Do NOT get water inside containers. Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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General Information: Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation. Do not expose spill to water.

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## SECTION 7 - HANDLING and STORAGE

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### Handling:

Wash thoroughly after handling. Use with adequate ventilation. Do not allow water to get into the container because of violent reaction. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Do not allow contact with water. Discard contaminated shoes. Keep from contact with moist air and steam.

### Storage:

Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from water.

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## SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

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### Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

### Personal Protective Equipment

#### Eyes:

Not available.

#### Skin:

Wear appropriate protective gloves to prevent skin exposure.

#### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

#### Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

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## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Physical State: Liquid  
Color: colorless or slight yellow  
Odor: chlorine-like - sulfurous odor  
pH: Not available.  
Vapor Pressure: 133 mbar @ 20 C  
Viscosity: 0.7 cP 24 C  
Boiling Point: 69.1 deg C  
Freezing/Melting Point: -54.1 deg C  
Autoignition Temperature: Not available.  
Flash Point: Not available.  
Explosion Limits, lower: Not available.  
Explosion Limits, upper: Not available.  
Decomposition Temperature:  
Solubility in water: Reacts with water.  
Specific Gravity/Density: 1.67  
Molecular Formula: Cl2O2S  
Molecular Weight: 134.9648

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## SECTION 10 - STABILITY AND REACTIVITY

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### Chemical Stability:

Stable under normal temperatures and pressures. Combines vigorously or explosively with water.

### Conditions to Avoid:

Incompatible materials, contact with water, acids, metals, alkaline materials, strong oxidants, exposure to moist air or water, amines.

### Incompatibilities with Other Materials:

Oxidizing agents.

### Hazardous Decomposition Products:

Hydrogen chloride, carbon monoxide, oxides of sulfur, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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### RTECS#:

CAS# 7791-25-5: WT4870000

### LD50/LC50:

CAS# 7791-25-5: Inhalation, rat: LC50 = 159 ppm/4H.

### Carcinogenicity:

Sulfuryl chloride -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

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## SECTION 12 - ECOLOGICAL INFORMATION

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## SECTION 13 - DISPOSAL CONSIDERATIONS

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Products which are considered hazardous for supply are classified as Special Waste and the disposal of such chemicals is covered by regulations which may vary according to location. Contact a specialist disposal company or the local

waste regulator for advice. Empty containers must be decontaminated before returning for recycling.

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## SECTION 14 - TRANSPORT INFORMATION

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### IATA

Shipping Name: SULPHURYL CHLORIDE

Hazard Class: 8

UN Number: 1834

Packing Group: I

### IMO

Shipping Name: SULPHURYL CHLORIDE

Hazard Class: 8

UN Number: 1834

Packing Group: I

### RID/ADR

Shipping Name: SULPHURYL CHLORIDE

Hazard Class: 8

UN Number: 1834

Packing group: I

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## SECTION 15 - REGULATORY INFORMATION

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### European/International Regulations

#### European Labeling in Accordance with EC Directives

Hazard Symbols: C

Risk Phrases:

R 14 Reacts violently with water.

R 34 Causes burns.

R 37 Irritating to respiratory system.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28A After contact with skin, wash immediately with plenty of water.

S 37 Wear suitable gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

#### WGK (Water Danger/Protection)

CAS# 7791-25-5: 1

#### United Kingdom Occupational Exposure Limits

#### United Kingdom Maximum Exposure Limits

#### Canada

CAS# 7791-25-5 is listed on Canada's DSL List.

CAS# 7791-25-5 is listed on Canada's Ingredient Disclosure List.

#### Exposure Limits

#### US FEDERAL

##### TSCA

CAS# 7791-25-5 is listed on the TSCA inventory.

MSDS Creation Date: 6/23/2004 Revision #0 Date: Original.

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