

Sulphur Trioxide

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Sulphur Trioxide
CAS Number: 7446-11-9
EC Number: 231-197-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use: Laboratory chemicals, Industrial & for professional use only

1.3 Details of the supplier of the safety data sheet

Company name: East Harbour Group Ltd
20 Clough Road, Severalls Industrial Park
Colchester, Essex, CO4 9QS
United Kingdom

Telephone: +44 (0) 333 242 0100
Email: info@eastharbourgroup.com

1.4 Emergency telephone number

Emergency telephone: 0800 246 1274

Section 2: Hazardous identification

2.1 Classification of the substance or mixture

Skin corrosion, Category 1A
Specific target organ toxicity \u2013 single exposure, Category 3

2.2 Label elements

Pictogram



Signal Word

Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

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Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower
P304 + P340 + P310	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310	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.
P363	Wash contaminated clothing before reuse.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Reacts violently with water.

Section 3: Composition/information on ingredients

3.1 Substances

Synonyms:	Sulfuric anhydride
Formula:	O ₃ S
Molecular weight:	80.06 g/mol
CAS-No.:	7446-11-9
EC-No.:	231-197-3

Hazardous components

Component	Classification	Concentration
Sulphur trioxide	Skin Corr. 1A; Eye Dam. 1; STOT SE 3; H314, H335	90 - 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

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In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

Section 5: Fire-fighting measures

5.1 Fire Fighting Media and Instructions:

Suitable extinguishing media: Dry powder

5.2 Special hazards arising from the substance or mixture

No data available

5.3 Advice for firefighters

Special protective equipment: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13

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Section 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never allow product to get in contact with water during storage. Reacts violently with water. Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

Section 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls /

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, Flame retardant protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

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Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Form: liquid
Odor	No data available
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	Melting point/range: 16.8 °C (62.2 °F) - lit.
Initial Boiling Point and Boiling Range	44.7 °C (112.5 °F) - lit.
Flash Point	No data available
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	680 hPa (510 mmHg) at 37.7 °C (99.9 °F) 373 hPa (280 mmHg) at 25 °C (77 °F)
Vapor Density	2.76 - (Air = 1.0)
Relative Density	1.97 g/mL at 25 °C (77 °F)
Water Solubility	No data available
Partition Coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	The substance or mixture is not classified as oxidizing

9.2 Other safety information

Relative vapour density	2.76 - (Air = 1.0)
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Section 10: Stability and Reactivity

10.1 Reactivity	Reacts violently with water
10.2 Chemical Stability	Stable under recommended storage conditions
10.3 Possibility of hazardous reactions	Reacts violently with water
10.4 Conditions to avoid	Exposure to moisture
10.5 Incompatible materials	Organic materials, Powdered metals, Bases, Strong bases, Metals, Water, Sulphur trioxide reacts violently with water to form sulfuric acid. Contact with air causes rapid absorption of moisture and the release of dense, white, sulfuric acid fumes, Incompatible with: Nitrates, Chlorates, Cyanides, picrate's, Sulphide's

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10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Sulphur oxides
Other decomposition products - No data available
In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

LC50 Inhalation - Rat - 4 h - 375 mg/m³

Remarks: Extremely corrosive and destructive to tissue.

Dermal: No data available

Skin corrosion/irritation Skin - Rabbit

Result: Severe skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Severe eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens. No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

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Additional Information

RTECS: WT4830000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

Section 12: Ecological Information

12.1 Toxicity	No data available
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
12.6 Other adverse effects	No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

Section 14: Transport Information

DOT (US)

UN number: 1829

Class: 8 (6.1)

Packing group: I

Proper shipping name: Sulphur trioxide, stabilized

Reportable Quantity (RQ):

Poison Inhalation Hazard: Hazard zone B

IMDG

UN number: 1829

Class: 8

Packing group: I

EMS-No:F-A,S-B

Proper shipping name: SULPHUR TRIOXIDE, STABILIZED

IATA

UN number: 1829

Class: 8

Proper shipping name: Sulphur trioxide, stabilized

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IATA Passenger: Not permitted for transport

IATA Cargo: Not permitted for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

Section 15: Regulatory Information

SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

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SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right To Know Components

Sulphur trioxide	CAS-No. 7446-11-9	Revision Date 1993-04-24
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Pennsylvania Right To Know Components

Sulphur trioxide	CAS-No. 7446-11-9	Revision Date 1993-04-24
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Sulphur trioxide	CAS-No. 7446-11-9	Revision Date 1993-04-24

New Jersey Right To Know Components

Sulphur trioxide	CAS-No. 7446-11-9	Revision Date 1993-04-24
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California Prop. 65 Components

WARNING! This product contains a chemical known to the State of California to cause cancer.

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WARNING! This product contains a chemical known to the State of California to cause cancer.

Sulphur trioxide	CAS-No. 7446-11-9	Revision Date 2007-09-28
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Section 16: Other Information

Full text of H-Statements referred to under sections 2 and 3.

Eye Dam.	Serious eye damage
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

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HMIS Rating

Health hazard:	3
Chronic Health Hazard:	
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	3
Fire Hazard:	0
Reactivity Hazard:	0

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.