

ALFAAL09478

## 2,4,6-Trifluorophenyl isothiocyanate

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

产品说明:  
Product Description: 2,4,6-三氟苯基异硫氰酸酯  
2,4,6-Trifluorophenyl isothiocyanate

Cat No. : L09478  
Molecular Formula C7 H2 F3 NS

Supplier Avocado Research Chemicals Ltd.  
(Part of Thermo Fisher Scientific)  
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United Kingdom  
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**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

E-mail address begel.sdsdesk@thermofisher.com

Recommended Use Laboratory chemicals.  
Uses advised against No Information available

### SECTION 2. HAZARD IDENTIFICATION

**Physical State**  
Liquid

**Appearance**  
Light yellow

**Odor**  
pungent

#### Emergency Overview

Harmful if swallowed. Harmful in contact with skin. Causes severe skin burns and eye damage. Harmful if inhaled. Lachrymator (substance which increases the flow of tears).

#### Classification of the substance or mixture

|                                    |              |
|------------------------------------|--------------|
| Acute Oral Toxicity                | Category 4   |
| Acute Dermal Toxicity              | Category 4   |
| Acute Inhalation Toxicity - Vapors | Category 4   |
| Skin Corrosion/Irritation          | Category 1 B |
| Serious Eye Damage/Eye Irritation  | Category 1   |

#### Label Elements



Signal Word

Danger

# SAFETY DATA SHEET

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**Hazard Statements**

H314 - Causes severe skin burns and eye damage

H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

P264 - Wash face, hands and any exposed skin 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**

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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 POISON CENTER or doctor

P330 - Rinse mouth

P331 - Do NOT induce vomiting

P362 + P364 - Take off contaminated clothing and wash it before reuse

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Physical and Chemical Hazards**

None identified.

**Health Hazards**

Harmful if swallowed. Harmful in contact with skin. Corrosive. Causes skin and eye burns. Harmful if inhaled. Lachrymator (substance which increases the flow of tears).

**Environmental hazards**

Contains no substances known to be hazardous to the environment or not degradable in waste water treatment plants.

**Other Hazards**

Lachrymator (substance which increases the flow of tears)

This product does not contain any known or suspected endocrine disruptors.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component                            | CAS No      | Weight % |
|--------------------------------------|-------------|----------|
| 2,4,6-Trifluorophenyl isothiocyanate | 206761-91-3 | <=100    |

**SECTION 4. FIRST AID MEASURES****General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

**Skin Contact**

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

**Inhalation**

If not breathing, give artificial respiration. Remove from exposure, lie down. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician immediately.

**Ingestion**

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Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Most important symptoms and effects**

Causes burns by all exposure routes. 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

**Self-Protection of the First Aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**Notes to Physician**

Treat symptomatically.

### SECTION 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Extinguishing media which must not be used for safety reasons**

No information available.

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

**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. Thermal decomposition can lead to release of irritating gases and vapors.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions**

Should not be released into the environment. See Section 12 for additional Ecological Information.

**Methods for Containment and Clean Up**

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

Refer to protective measures listed in Sections 8 and 13.

### SECTION 7. HANDLING AND STORAGE

**Handling**

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage**

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place.

**Specific Use(s)**

Use in laboratories

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### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

#### Exposure Controls

##### Engineering Measures

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 (European standard - EN 166)

**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments        |
|----------------|-------------------|-----------------|-------------|-----------------------|
| Nitrile rubber | See manufacturers | -               | EN 374      | (minimum requirement) |
| Neoprene       | recommendations   |                 |             |                       |
| Natural rubber |                   |                 |             |                       |
| PVC            |                   |                 |             |                       |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, 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.

Remove gloves with care avoiding skin contamination.

**Skin and body protection** Long sleeved clothing

**Respiratory Protection** When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Large scale/emergency use** Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** Organic gases and vapours filter Type A Brown conforming to EN14387

**Small scale/Laboratory use** Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls** No information available.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** Light yellow  
**Physical State** Liquid

**Odor** pungent  
**Odor Threshold** No data available

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## 2,4,6-Trifluorophenyl isothiocyanate

|  |                                 |  |
|--|---------------------------------|--|
| <b>pH</b>                                      | No information available        |  |
| <b>Melting Point/Range</b>                     | No data available               |  |
| <b>Softening Point</b>                         | No data available               |  |
| <b>Boiling Point/Range</b>                     | 111 - 112 °C / 231.8 - 233.6 °F |  |
| <b>Flash Point</b>                             | No information available        | <b>Method -</b> No information available |
| <b>Evaporation Rate</b>                        | No data available               |  |
| <b>Flammability (solid,gas)</b>                | Not applicable                  | Liquid                                   |
| <b>Explosion Limits</b>                        | No data available               |  |
| <b>Vapor Pressure</b>                          | No data available               |  |
| <b>Vapor Density</b>                           | No data available               | (Air = 1.0)                              |
| <b>Specific Gravity / Density</b>              | No data available               |  |
| <b>Bulk Density</b>                            | Not applicable                  | Liquid                                   |
| <b>Water Solubility</b>                        | No information available        |  |
| <b>Solubility in other solvents</b>            | No information available        |  |
| <b>Partition Coefficient (n-octanol/water)</b> |                                 |  |
| <b>Autoignition Temperature</b>                | No data available               |  |
| <b>Decomposition Temperature</b>               | No data available               |  |
| <b>Viscosity</b>                               | No data available               |  |
| <b>Explosive Properties</b>                    | No information available        |  |
| <b>Oxidizing Properties</b>                    | No information available        |  |
| <b>Molecular Formula</b>                       | C7 H2 F3 NS                     |  |
| <b>Molecular Weight</b>                        | 189.16                          |  |

### SECTION 10. STABILITY AND REACTIVITY

|                                 |                                 |
|---------------------------------|---------------------------------|
| <b>Stability</b>                | Stable under normal conditions. |
| <b>Hazardous Reactions</b>      | None under normal processing.   |
| <b>Hazardous Polymerization</b> | No information available.       |
| <b>Conditions to Avoid</b>      | None known.                     |
| <b>Materials to avoid</b>       | No information available.       |

**Hazardous Decomposition Products** None under normal use conditions.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### Product Information

|   |                   |
|---|-------------------|
| <b>(a) acute toxicity;</b>                    |                   |
| <b>(b) skin corrosion/irritation;</b>         | Category 1 B      |
| <b>(c) serious eye damage/irritation;</b>     | Category 1        |
| <b>(d) respiratory or skin sensitization;</b> |                   |
| <b>Respiratory</b>                            | No data available |
| <b>Skin</b>                                   | No data available |
| <b>(e) germ cell mutagenicity;</b>            | No data available |
| <b>(f) carcinogenicity;</b>                   | No data available |

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There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

Target Organs No information available.

(j) aspiration hazard; No data available

**Symptoms / effects, both acute and delayed** 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

### SECTION 12. ECOLOGICAL INFORMATION

**Ecotoxicity effects** Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

**Persistence and Degradability** No information available

**Bioaccumulative Potential** No information available

**Mobility in soil** No information available

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors  
**Persistent Organic Pollutant** This product does not contain any known or suspected substance  
**Ozone Depletion Potential** This product does not contain any known or suspected substance

### SECTION 13. DISPOSAL CONSIDERATIONS

**Waste from Residues/Unused Products** Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not flush to sewer. Large amounts will affect pH and harm aquatic organisms.

### SECTION 14. TRANSPORT INFORMATION

#### Road and Rail Transport

**UN-No** UN2922  
**Proper Shipping Name** Corrosive liquid, toxic, n.o.s.  
**Technical Shipping Name** (2,4,6-Trifluorophenyl isothiocyanate)  
**Hazard Class** 8

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## 2,4,6-Trifluorophenyl isothiocyanate

**Subsidiary Hazard Class** 6.1  
**Packing Group** III

### IMDG/IMO

**UN-No** UN2922  
**Proper Shipping Name** Corrosive liquid, toxic, n.o.s.  
**Technical Shipping Name** (2,4,6-Trifluorophenyl isothiocyanate)  
**Hazard Class** 8  
**Subsidiary Hazard Class** 6.1  
**Packing Group** III

### IATA

**UN-No** UN2922  
**Proper Shipping Name** Corrosive liquid, toxic, n.o.s.  
**Technical Shipping Name** (2,4,6-Trifluorophenyl isothiocyanate)  
**Hazard Class** 8  
**Subsidiary Hazard Class** 6.1  
**Packing Group** III

**Special Precautions for User** No special precautions required

## SECTION 15. REGULATORY INFORMATION

### International Inventories

X = listed, China (IECSC), Europe (EINECS/ELINCS/NLP), U.S.A. (TSCA), Canada (DSL/NDSL), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), Korea (KECL).

### National Regulations

## SECTION 16. OTHER INFORMATION

**Prepared By** Health, Safety and Environmental Department  
**Revision Date** 08-May-2024  
**Revision Summary** New emergency telephone response service provider.

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

### Legend

**CAS** - Chemical Abstracts Service

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

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

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

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

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

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

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

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## 2,4,6-Trifluorophenyl isothiocyanate

**WEL** - Workplace Exposure Limit  
**ACGIH** - American Conference of Governmental Industrial Hygienists  
**DNEL** - Derived No Effect Level  
**RPE** - Respiratory Protective Equipment  
**LC50** - Lethal Concentration 50%  
**NOEC** - No Observed Effect Concentration  
**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average  
**IARC** - International Agency for Research on Cancer  
**PNEC** - Predicted No Effect Concentration  
**LD50** - Lethal Dose 50%  
**EC50** - Effective Concentration 50%  
**POW** - Partition coefficient Octanol:Water  
**vPvB** - very Persistent, very Bioaccumulative

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association  
**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road  
**OECD** - Organisation for Economic Co-operation and Development  
**BCF** - Bioconcentration factor

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code  
**MARPOL** - International Convention for the Prevention of Pollution from Ships  
**ATE** - Acute Toxicity Estimate  
**VOC** - (Volatile Organic Compound)

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>  
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### 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 Safety Data Sheet**