

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**
**Product Identifier**

Perihalan Produk: **2-Chloro-5-nitrobenzotrifluoride**  
 Product Description: **2-Chloro-5-nitrobenzotrifluoride**  
 Cat No. : L06623  
 Synonyms 2-Chloro-5-nitro-\$1,\$1,\$1-trifluorotoluene  
 CAS No 777-37-7  
 Molecular Formula C7 H3 Cl F3 N O2

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

Recommended Use Laboratory chemicals.  
 Uses advised against No Information available

**Company**

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd  
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,  
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,  
 Selangor Darul Ehsan, Malaysia.  
 Main line: +60 3-5525 7888

**Supplier**

E-mail address Enquiry.my@thermofisher.com

**Emergency Telephone Number**

Tel: +03-5525 7888  
 CHEMTREC Malaysia 1-800-815-308 (Malay)  
 CHEMTREC Malaysia (Kuala Lumpur) +(60)-327884561 (Malay)

**SECTION 2: HAZARDS IDENTIFICATION**
**Classification of the substance or mixture**

|  |                   |
|--|-------------------|
| Acute oral toxicity                                | Category 4 (H302) |
| Acute dermal toxicity                              | Category 4 (H312) |
| Acute Inhalation Toxicity - Dusts and Mists        | Category 4 (H332) |
| Skin Corrosion/Irritation                          | Category 2 (H315) |
| Serious Eye Damage/Eye Irritation                  | Category 2 (H319) |
| Specific target organ toxicity - (single exposure) | Category 3 (H335) |

**Label Elements**


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## Signal Word

## Warning

### Hazard Statements

H335 - May cause respiratory irritation

H315 - Causes skin irritation

H319 - Causes serious eye irritation

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

### Precautionary Statements

#### Prevention

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

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

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

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

P312 - Call a POISON CENTER or doctor if you feel unwell

P330 - Rinse mouth

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

### Other Hazards

This product does not contain any known or suspected endocrine disruptors

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component                           | CAS No   | Weight % |
|-------------------------------------|----------|----------|
| 4-Nitro-1-chlorobenzo-2-trifluoride | 777-37-7 | <=100    |

## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

#### Eye Contact

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

#### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention.

#### Ingestion

Clean mouth with water. Get medical attention.

#### Inhalation

Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

#### 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.

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

No information available.

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

Notes to Physician

Treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### Extinguishing media

#### **Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Chemical foam.

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

No information available.

### Special hazards arising from the substance or mixture

Flammable.

### **Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Gaseous hydrogen fluoride (HF), Hydrogen chloride gas.

### Advice for fire-fighters

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

Ensure adequate ventilation.

### Environmental precautions

See Section 12 for additional Ecological Information.

### Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray.

### Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat, sparks and flame.

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## Specific End Uses

Use in laboratories.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

| Component                           | Malaysia | ACGIH TLV                  | OSHA PEL                             |
|-------------------------------------|----------|----------------------------|--------------------------------------|
| 4-Nitro-1-chlorobenzo-2-trifluoride |          | TWA: 2.5 mg/m <sup>3</sup> | (Vacated) TWA: 2.5 mg/m <sup>3</sup> |

| Component                           | European Union | The United Kingdom | Germany  |
|-------------------------------------|----------------|--------------------|--|
| 4-Nitro-1-chlorobenzo-2-trifluoride |                |                    | TWA: 1 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 4<br>TWA: 1 mg/m <sup>3</sup> (8 Stunden). MAK<br>Haut |

### Exposure Controls

#### 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

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

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.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators

#### Recommended Filter type:

Organic gases and vapours filter Type A Brown conforming to EN14387

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

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

### Information on basic physical and chemical properties

#### Appearance

Yellow

#### Physical State

Liquid

#### Odor

No information available

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|   |                          |                                   |
|---|--------------------------|-----------------------------------|
| Odor Threshold                          | No data available        |                                   |
| pH                                      | No information available |                                   |
| Melting Point/Range                     | No data available        |                                   |
| Softening Point                         | No data available        |                                   |
| Boiling Point/Range                     | 108 °C / 226.4 °F        | @ 10 mmHg                         |
| Flash Point                             | 98 °C / 208.4 °F         | Method - No information available |
| Evaporation Rate                        | No data available        |                                   |
| Flammability (solid,gas)                | Not applicable           | Liquid                            |
| Explosion Limits                        | No data available        |                                   |
| Vapor Pressure                          | No information available |                                   |
| Vapor Density                           | No information available | (Air = 1.0)                       |
| Specific Gravity / Density              | 1.527                    |                                   |
| Bulk Density                            | Not applicable           | Liquid                            |
| Water Solubility                        | No information available |                                   |
| Solubility in other solvents            | No information available |                                   |
| Partition Coefficient (n-octanol/water) |                          |                                   |
| Autoignition Temperature                | No data available        |                                   |
| Decomposition Temperature               | No data available        |                                   |
| Viscosity                               | No data available        |                                   |
| Explosive Properties                    | No information available |                                   |
| Oxidizing Properties                    | No information available |                                   |
| Molecular Formula                       | C7 H3 Cl F3 N O2         |                                   |
| Molecular Weight                        | 225.55                   |                                   |

## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

None known, based on information available.

### Chemical Stability

Stable under normal conditions.

### Possibility of Hazardous Reactions

#### Hazardous Polymerization Hazardous Reactions

Hazardous polymerization does not occur.  
No information available.

### Conditions to Avoid

Incompatible products.

### Incompatible Materials

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Strong oxidizing agents. Strong bases.

## Hazardous Decomposition Products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Gaseous hydrogen fluoride (HF). Hydrogen chloride gas.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects

#### Product Information

**(a) acute toxicity;**

|            |            |
|------------|------------|
| Oral       | Category 4 |
| Dermal     | Category 4 |
| Inhalation | Category 4 |

**(b) skin corrosion/irritation;** Category 2

**(c) serious eye damage/irritation;** Category 2

**(d) respiratory or skin sensitization;**

|             |                   |
|-------------|-------------------|
| Respiratory | No data available |
| Skin        | No data available |

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available

There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

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

**Symptoms / effects, both acute and delayed** No information available.

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

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## SECTION 12: ECOLOGICAL INFORMATION

|  |   |
|--|---|
| <u>Ecotoxicity effects</u>             | Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants. |
| <u>Persistence and degradability</u>   | No information available  |
| <u>Bioaccumulative potential</u>       | No information available  |
| <u>Mobility in soil</u>                | No information available.   |
| <u>Endocrine Disruptor Information</u> | This product does not contain any known or suspected endocrine disruptors   |
| <u>Other adverse effects</u>           | No information available  |

## SECTION 13: DISPOSAL CONSIDERATIONS

|  |   |
|--|---|
| <u>Waste treatment methods</u>             |   |
| <b>Waste from Residues/Unused Products</b> | 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 |
| <b>Contaminated Packaging</b>              | Dispose of this container to hazardous or special waste collection point.   |
| <b>Other Information</b>                   | Waste codes should be assigned by the user based on the application for which the product was used Do not empty into drains   |

## SECTION 14: TRANSPORT INFORMATION

|                                     |                                 |
|-------------------------------------|---------------------------------|
| <u>IMDG/IMO</u>                     |                                 |
| UN-No                               | UN2810                          |
| Hazard Class                        | 6.1                             |
| Packing Group                       | III                             |
| Proper Shipping Name                | Toxic liquid, organic, n.o.s.   |
| <u>Road and Rail Transport</u>      |                                 |
| UN-No                               | UN2810                          |
| Hazard Class                        | 6.1                             |
| Packing Group                       | III                             |
| Proper Shipping Name                | Toxic liquid, organic, n.o.s.   |
| <u>IATA</u>                         |                                 |
| UN-No                               | UN2810                          |
| Hazard Class                        | 6.1                             |
| Packing Group                       | III                             |
| Proper Shipping Name                | TOXIC LIQUID, ORGANIC, N.O.S.*  |
| <b>Special Precautions for User</b> | No special precautions required |

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## SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

| Component                           | EINECS    | TSCA | DSL | PICCS | ENCS | ISHL | IECSC | AICS | KECL |
|-------------------------------------|-----------|------|-----|-------|------|------|-------|------|------|
| 4-Nitro-1-chlorobenzo-2-trifluoride | 212-287-1 | X    | -   | -     | X    | X    | -     | -    | -    |

### National Regulations

**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 16: OTHER INFORMATION

### 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/NDL** - 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

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**POW** - Partition coefficient Octanol:Water

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**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

**Prepared By**

**Revision Date**

**Revision Summary**

Health, Safety and Environmental Department

26-Mar-2025

Not applicable.

**In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013**



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## Disclaimer

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**End of Safety Data Sheet**