



# SAFETY DATA SHEET

Revision Date 18-Dec-2025

## Revision Number 5

**This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)**

## 1. Identification

<b>Product Name</b>	4-Chloro-3-nitrobenzotrifluoride
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**Cat No.:** AC109700000; AC109700100; AC109701000

**CAS No** 121-17-5  
**Synonyms** 4-Chloro-3-nitro-\$1,\$1,\$1-trifluorotoluene

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Food, drug, pesticide or biocidal product use.

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

## Company

### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **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

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024).

Acute oral toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	

## Label Elements

## Signal Word

### Warning

## Hazard Statements

Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation



### Precautionary Statements

#### Prevention

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear protective gloves/protective clothing/eye protection/face protection  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area

#### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing  
Call a POISON CENTER or doctor if you feel unwell

#### Skin

IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing

#### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

#### Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

#### 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

#### Hazards not otherwise classified (HNOC)

None identified

#### Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	<=100

### 4. 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.

<b>Inhalation</b>	Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.
<b>Ingestion</b>	Clean mouth with water. Get medical attention.
<b>Most important symptoms and effects</b>	No information available.
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

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

**Unsuitable Extinguishing Media** No information available

**Flash Point** 101 °C / 213.8 °F

**Method -** No information available

**Autoignition Temperature** 478 °C / 892.4 °F

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**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.

**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**  
2

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required.

**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.

## 7. Handling and Storage

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

**Storage.** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Incompatible Materials. Strong oxidizing agents. Strong bases.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

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

**Personal Protective Equipment**

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

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

## 9. Physical and chemical properties

**Appearance**

Physical State	Liquid	Remarks	Method
<b>Color</b>	Yellow		
<b>Odor</b>	No information available		
<b>Odor Threshold</b>	No information available		
<b>Property</b>	<b>Values</b>		
<b>Melting Point/Range</b>	-2 °C / 28.4 °F		
<b>Softening Point</b>	No data available		
<b>Boiling Point/Range</b>	222 °C / 431.6 °F	@ 760 mmHg	
<b>Flash Point</b>	101 °C / 213.8 °F	<b>Method</b> - No information available	
<b>Flammability (liquid)</b>	No data available		
<b>Flammability (solid,gas)</b>	Not applicable		
<b>Explosion Limits</b>	No data available	Liquid	
<b>Autoignition Temperature</b>	478 °C / 892.4 °F		
<b>Decomposition Temperature</b>	No data available		
<b>pH</b>	No information available		
<b>Viscosity</b>	No data available		
<b>Water Solubility</b>	660 mg/l water (20°C)		
<b>Solubility in other solvents</b>	No information available		
<b>Partition Coefficient (n-octanol/water)</b>	0.05 hPa @ 20 °C		
<b>Vapor Pressure</b>	1.511		
<b>Density / Specific Gravity</b>	Not applicable	Liquid	
<b>Bulk Density</b>	No information available	(Air = 1.0)	
<b>Vapor Density</b>	Not applicable (liquid)		
<b>Particle characteristics</b>			
<b>Other Information</b>			
<b>Molecular Formula</b>	C7 H3 Cl F3 N O2		
<b>Molecular Weight</b>	225.55		

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Incompatible products.

**Incompatible Materials** Strong oxidizing agents, Strong bases

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

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

### Information on expected route of exposure

**Inhalation** Not an expected route of exposure.

**Ingestion** May be harmful if swallowed.

**Eyes** Avoid contact with eyes. Irritating to eyes.

**Skin** Avoid contact with skin. May cause irritation.

### Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Nitro-1-chlorobenzo-4-trifluoride	LD50 = 1075 mg/kg ( Rat )	LD50 > 2000 mg/kg ( Rat )	-

**Toxicologically Synergistic Products** No information available

**(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;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	Not listed				

**(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.

**(i) 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.

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

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

**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

<b>UN-No</b>	UN2307
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II

### TDG

<b>UN-No</b>	UN2307
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II

### IATA

<b>UN-No</b>	UN2307
<b>Proper Shipping Name</b>	3-NITRO-4-CHLOROBENZOTRIFLUORIDE
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II

### IMDG/IMO

<b>UN-No</b>	UN2307
<b>Proper Shipping Name</b>	3-NITRO-4-CHLOROBENZOTRIFLUORIDE
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	II

## 15. Regulatory Information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	X	ACTIVE	-

### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

#### **International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	-	X	204-451-6	X	X	X	-	X	KE-05793

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

#### **U.S. Federal Regulations**

##### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

##### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

**CWA (Clean Water Act)** Not applicable

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration** Not applicable

##### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

##### **U.S. Department of Transportation**

Reportable Quantity (RQ): N  
DOT Marine Pollutant Y  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

#### **Other International Regulations**

**Mexico - Grade** No information available

## Authorisation/Restrictions according to EU REACH Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	-	-	-

## 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)
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	Not applicable	Not applicable	Not applicable	Not applicable

## Contains component(s) that meet a 'definition' of per &amp; poly fluoroalkyl substance (PFAS)?

See table for values

Component	OECD PFAS	US (EPA) PFAS	EU (ECHA) PFAS	UK (HSE) PFAS	Chemsec PFAS (Sin List)
2-Nitro-1-chlorobenzo-4-trifluoride (CAS #: 121-17-5)	-	-	Listed	Listed	-

## PFAS Legend

Listed = Meets the PFAS definition of the named authority

## Other International Regulations

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)
2-Nitro-1-chlorobenzo-4-trifluoride	121-17-5	Not applicable	Not applicable	Not applicable	Not applicable

## 16. Other Information

## Prepared By

Product stewardship (Regulatory Affairs)  
 Thermo Fisher Scientific  
 email - begel.sdsdesk@thermofisher.com

## Revision Date

18-Dec-2025

## Print Date

18-Dec-2025

## Revision Summary

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

## 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