



1. Identification of Substance / Mixture**Product Identifier**

Product Name	Chloromethyl chloroformate
Other Names	
Product Code	320123
CAS	22128-62-7
MDL	MFCD00077688
EINECS	N/A
REACH Registration Number	
Relevant Uses	Research and Development
Uses Advised Against	No uses advised against.

Supplier Details

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2. Hazards Identification

Classification	Met. Corr. 1 Skin Corr. 1B Acute Tox. 3
Signal Word	Danger
Pictograms	 GHS05  GHS06
Hazards	H290 Maybe corrosive to metals. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled.
Precautions	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear face protection. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with 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. P310 Immediately call a POISON CENTER/doctor. P311 Call a POISON CENTER/doctor. P321 Specific treatment. P363 Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in a corrosion resistant/... container with a resistant inner liner.
Other Classification Hazards	

3. Composition of Ingredients

SUBSTANCE				
Name	CAS	Einecs	Composition	Hazards
Chloromethyl chloroformate	22128-62-7	N/A	<= 100%	H290 Met. Corr. 1 H314 Skin Corr. 1B H331 Acute Tox. 3

4. First Aid Measures

Eye contact	In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing and seek immediate medical attention.
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Ingestion	If swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do not induce vomiting.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a poison centre or physician. If breathing is irregular or stopped, administer artificial respiration.
Skin Contact	After contact with skin or hair, wash immediately with plenty of water and soap. Remove contaminated clothing immediately. Immediately seek medical attention.
General Advice	No additional advice.
Most Important Symptoms and Effects	Severe burns may occur.
Immediate First Aid Measures	No additional first aid measures required.

5. Fire Fighting Measures

Suitable Fire Extinguishing Media	Carbon dioxide, alcohol resistant foam or dry chemical powder.
Unsuitable Fire Extinguishing Media	No known unsuitable media.
Special Hazards	In combustion toxic fumes may form.
Advice for Fire Fighters	As in any fire, wear self-contained breathing apparatus and full protective gear.

6. Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Keep personnel away from spill/leak.
Environmental Precautions	Do not let product enter drains or waterways. Avoid discharge into the environment.
Containment - Methods and Materials	Spill Response should only be carried out by trained or qualified personnel.
Referenced SDS Sections	For personal protection see section 8. For disposal see section 13.

7. Handling and Storage

Personal Precautions

Safe Handling	Wear appropriate personal protective equipment. Use only under a chemical fume hood ensuring adequate ventilation, especially if dust, aerosol or fumes will be generated. Avoid contact with skin, eyes and clothing. For precautions see section 2.2.
Protection Against Explosion and Fire	Where possible, use anti static and spark proof equipment when handling.
General Occupational Hygiene	Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

Conditions for Safe Storage and Incompatibilities

Managing Storage Risks	Keep container tightly closed and upright. Store in a cool, dry and well-ventilated place.
Storage Controls	Maybe corrosive to metals.
Maintaining Integrity	Do not pack in metal.
Other Advice	No other specific advice available.
Specific End Use(s)	No specific end uses are advised. The products supplied are for research purposes only.

8. Exposure Controls / Personal Protection

Control Parameters

Country	Info	Long Term (ppm)	Long Term (mgm3)	Short Term (ppm)	Short Term (mgm3)	Ceiling (ppm)	Ceiling (mgm3)	Other Unit	Remarks
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Engineering Measures	Use only under a chemical fume hood ensuring adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.
Face Protection	Wear tightly fitting safety goggles which adhere to European standard EN 166. Ensure eye bath is to hand.
Hand Protection	Handle with impermeable gloves. Inspect gloves before use. Gloves must satisfy the specifications of EU Directive 89/686/EEC and the standard EN374 derived from it. 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.
Skin Protection	Wear appropriate protective clothing ensuring all skin is covered. Wear safety shoes that meet at least S1 standards. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protection	Product should be handled in a fume cupboard with adequate extraction. No respiratory equipment is needed under normal use conditions.
Hygiene Protection	Ensure hair or skin particles cannot enter the chemical container.
Environment Exposure Controls	Avoid discharge into the environment, see section 6.2.

9. Physical and Chemical Properties

State	Liquid
Appearance	Liquid
Odour	No data available.
Odour Threshold	No data available.
pH	No data available.
Melting Point / Freezing Point	No data available.
Initial Boiling Point	No data available.
Boiling Range	107Å°C to 108Å°C
Flash Point	95 Å°C
Evaporation Rate	No data available.
Flammability	No data available.
Upper / Lower Flammability or Explosion Limits	No data available.
Vapour Pressure	No data available.
Vapour Density	No data available.
Relative Density	1.45g/cm ³ at 20Å°C
Solubility	No data available.
Partion Coefficient	No data available.
Auto Ignition Temperature	No data available.
Decomposition Temperature	No data available.
Viscosity	No data available.
Explosive Properties	No data available.
Oxidising Properties	No data available.
Other information	No additional information available

10. Stability and Reactivity

Reactivity	Maybe corrosive to metals.
Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal storage conditions.
Conditions To Avoid	Excess heat. Exposure to moisture.
Incompatible Materials	Metals.
Hazardous Decomposition Products	No Data Available.

11. Toxicology Information

Acute Toxicity	No Toxicology data available for this product.
Skin Corrosion / Irritation	Strong corrosive effect on skin and mucous membranes.
Serious Eye Damage / Irritation	Strong corrosive effect.
Respiratory or Skin Sensitisation	Toxic if inhaled.
Germ Cell Mutagenicity	No Toxicology data available for this product.
Carcinogenicity	No Toxicology data available for this product.
Reproductive Toxicity	No Toxicology data available for this product.
STOT-single Exposure	No Toxicology data available for this product.
STOT-repeated Exposure	No Toxicology data available for this product.
Aspiration Hazard	No Toxicology data available for this product.
Additional Toxicology Information	No Toxicology data available for this product.

12. Ecological Information

Toxicity	No Ecological data available for this product.
Persistence and Degradability	No Ecological data available for this product.
Bio-Accumulative Potential	No Ecological data available for this product.
Mobility in Soil	No Ecological data available for this product.
	No Ecological data available for this product.

Results of PBT and vPvB assessment**Endocrine Disrupting Properties** No Ecological data available for this product.**Other Adverse Effects** No Ecological data available for this product.**13. Disposal Considerations****Disposal Operations** Ensure product is disposed of by licensed waste carriers.**Disposal of Packaging** Ensure INNER PACKAGING is disposed of by licensed waste carriers. Some OUTER PACKAGING MAY be recyclable if not contaminated.**14. Transport Information**

IATA UN Number	2745	ADR UN Number	2745	IMDG UN Number	2745
IATA Proper Shipping Name	CHLOROMETHYL CHLOROFORMATE	ADR Proper Shipping Name	CHLOROMETHYL CHLOROFORMATE	IMDG Proper Shipping Name	CHLOROMETHYL CHLOROFORMATE
IATA Packing Group	II	ADR Packing Group	II	IMDG Packing Group	II
IATA Hazard Class	6.1	ADR Hazard Class	6.1	IMDG Hazard Class	6.1
IATA Sub Class	8	ADR Sub Class	8	IMDG Sub Class	8
				IMDG Special Provisions	
				IMDG IBS Instructions	
				IMDG IBC Instructions	IBC02
				IMDG Tank Instructions	T7
				IMDG Tank Provisions	TP2, TP13

15. Regulatory Information**Regulatory Information** As far as Fluorochem is aware, there are no further regulations controlling this product.**Chemical Safety Assessment** No Chemical Safety Assessment available for this product.**16. Other Information****Information Not Covered in Other Sections**

ADR: Accord Europeen sur le transport des marchandises Dangereuses par Route(European Agreement concerning the International Carriage of Dangerous Goods by road)
RID:Reglement International concernant le transport des marchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association ICAO:International Civil Aviation Organization
ICAO-TI: Technical Instructions by the ICAO
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS:Chemical Abstracts Service

Revision 2.205**Date Modified** 03/11/2022**Disclaimer** The product listed is for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this material safety data sheet, or in combination with any other product or process, is the responsibility of the user. This SDS adheres to Regulation (EC) No 1907/2006.