



Health
Fire
Reactivity
Personal Protection

Material Safety Data Sheet

4-Nitrobenzyl chloroformate MSDS

Section 1: Chemical Product and Company Identification

Product Name: 4-Nitrobenzyl chloroformate

Catalog Codes: SLN1975

Synonyms: 4-Nitrocarboboxychloride

Contact Information:

Sciencelab.com, Inc.

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call:

1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
4457-32-3	4-Nitrobenzyl chloroformate	95%	224-708-6

Hazard Symbols: C

Risk Phrases: 23/24/25 34

Section 3: Hazards Identification

EMERGENCY OVERVIEW: Not available. Appearance: yellow clear liquid. Not available.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects:

Eye: Causes eye burns. Lachrymator (substance which increases the flow of tears).

Skin: Causes skin burns. Toxic in contact with skin.

Ingestion: Causes gastrointestinal tract burns. May cause burning sensations, coughing, wheezing, laryngitis, shortness of breath and headache. Toxic if swallowed.

Inhalation: Causes chemical burns to the respiratory tract. Inhalation may be fatal as a result of spasm, inflammation, edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Toxic if inhaled. May cause burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Chronic: Not available.

Section 4: First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: Do not induce vomiting. Get medical aid immediately. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5: Fire and Explosion Data

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Dusts at sufficient concentrations can form explosive mixtures with air.

Extinguishing Media: Use foam, dry chemical, or carbon dioxide. DO NOT USE WATER!

Flash Point: 113 deg C (235.40 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: Not published.

Section 6: Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container.

Section 7: Handling and Storage

Handling: Do not breathe dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Use only in a chemical fume hood.

Storage: Store in a cool, dry place. Store in a tightly closed container. Store in a dry area. Keep refrigerated. (Store below 4°C/39°F.)

Section 8: Exposure Controls/Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
4-Nitrobenzyl chloroformate	none listed	none listed	none listed

OSHA Vacated PELs: 4-Nitrobenzyl chloroformate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment:

Eyes: Not available.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9: Physical and Chemical Properties

Physical State: Clear liquid

Appearance: yellow

Odor: Not available.

pH: Not available.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 32 deg C

Decomposition Temperature: Not available.

Solubility: Not available.

Specific Gravity/Density: Not available.

Molecular Formula: C₈H₆ClNO₄

Molecular Weight: 215.59

Section 10: Stability and Reactivity Data

Chemical Stability: May decompose on exposure to moist air or water. Moisture sensitive.

Conditions to Avoid: Incompatible materials, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents, acids, strong bases, alcohols, amines, ammonia.

Hazardous Decomposition Products: Hydrogen chloride, nitrogen oxides, carbon monoxide, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11: Toxicological Information

RTECS#:

CAS#: 4457-32-3 unlisted.

LD50/LC50: Not available.

Carcinogenicity: CAS# 4457-32-3: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: See actual entry in RTECS for complete information. The toxicological properties have not been fully investigated.

Section 12: Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

Other: Avoid entering into waters or underground water. Do not empty into drains.

Section 13: Disposal Considerations

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14: Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15: Other Regulatory Information

US FEDERAL:

TSCA: CAS# 4457-32-3 is listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.

Section 12b: None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.

SARA:

CERCLA Hazardous Substances and corresponding RQs: None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances: None of the chemicals in this product have a TPQ.

Section 313: No chemicals are reportable under Section 313.

Clean Air Act: This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE: CAS# 4457-32-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ. California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations:

European Labeling in Accordance with EC Directives:

Hazard Symbols: C

Risk Phrases: R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R 34 Causes burns.

Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S 38 In case of insufficient ventilation, wear suitable respiratory equipment. S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S 28A After contact with skin, wash immediately with plenty of water.

WGK (Water Danger/Protection): CAS# 4457-32-3: No information available.

Canada - DSL/NDSL: CAS# 4457-32-3 is listed on Canada's NDSL List.

Canada - WHMIS: WHMIS: Not available.

Canadian Ingredient Disclosure List:

Exposure Limits:

Section 16: Other Information

Created: 02/14/2005 10:16 PM

Last Updated: 11/01/2010 12:00 PM

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