



Health	2
Fire	1
Reactivity	0
Personal Protection	E

Material Safety Data Sheet

Hexadecyltrimethylammonium Chloride MSDS

Section 1: Chemical Product and Company Identification

Product Name: Hexadecyltrimethylammonium Chloride

Catalog Codes: SLH1246

CAS#: 112-02-7

RTECS: Not available.

TSCA: Not listed.

CI#: Not available.

Synonyms: 1-Hexadecanaminium, N,N,N-trimethyl-, chloride; Ammonium, hexadecyltrimethyl-, chloride; Cetrimonium chloride; Hexadecan-1-aminium, N,N,N-trimethyl-, chloride; N,N,N-Trimethyl-1-hexadecanaminium chloride; Trimethylhexadecylammonium chloride; Cetyltrimethylammonium chloride.

Chemical Formula: C₁₉H₄₂ClN

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
112-02-7	Hexadecyltrimethylammonium chloride	99	203-928-6

Hazard Symbols: XN N

Risk Phrases: 22 37/38 41

Section 3: Hazards Identification

EMERGENCY OVERVIEW: Appearance: white powder. Hygroscopic (absorbs moisture from the air). May be harmful if swallowed.

Danger!: May cause severe eye irritation and possible injury. Causes skin and respiratory tract irritation. Dangerous for the environment.

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects:

Eye: Causes severe eye irritation. May result in corneal injury.

Skin: Causes skin irritation. May be absorbed through the skin. In a human allergy study, only 33 of 5202 volunteers exhibited an allergic reaction to a product containing cetyltrimethylammonium chloride. (Lonza)

Ingestion: May cause irritation of the digestive tract. May be harmful if swallowed.

Inhalation: Causes respiratory tract irritation.

Chronic: Effects may be delayed.

Section 4: First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 3; Flammability: 1; Instability: 0

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. Avoid runoff into storm sewers and ditches which lead to waterways. Avoid generating dusty conditions. Provide ventilation.

Section 7: Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Use with adequate ventilation. Avoid breathing dust. Do not get in eyes. Avoid contact with skin and clothing.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.

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
Hexadecyltrimethylammonium chloride	none listed	none listed	none listed

OSHA Vacated PELs: Hexadecyltrimethylammonium chloride: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment:

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9: Physical and Chemical Properties

Physical State: Powder

Appearance: white

Odor: slightly fishy

pH: 6.5-8.3 (10% soln)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 55 - 60 deg C

Decomposition Temperature: > 150 deg C

Solubility: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: C₁₉H₄₂CIN

Molecular Weight: 319.75

Section 10: Stability and Reactivity Data

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Excess heat, exposure to moist air or water.

Incompatibilities with Other Materials: Strong oxidizing agents.

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

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

RTECS#:

CAS#: 112-02-7: ML9145000

LD50/LC50: CAS# 112-02-7: Skin, rabbit: LD50 = 4300 uL/kg/24H;

Carcinogenicity: CAS# 112-02-7: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: No data available.

Section 12: Ecological Information

Ecotoxicity: Fish: Zebrafish: 0.7 mg/l; 96 hr; LC50

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:	Corrosive Solid, N.O.S.				No information available.
Hazard Class:	8				
UN Number:	UN1759				
Packing Group:	III				

Section 15: Other Regulatory Information

US FEDERAL:

TSCA: CAS# 112-02-7 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.

SARA Codes: CAS # 112-02-7: acute.

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# 112-02-7 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: XN N

Risk Phrases: R 22 Harmful if swallowed. R 37/38 Irritating to respiratory system and skin. R 41 Risk of serious damage to eyes. R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases: S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 37/39 Wear suitable gloves and eye/face protection. S 60 This material and its container must be disposed of as hazardous waste. S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection): CAS# 112-02-7: 3

Canada - DSL/NDSL: CAS# 112-02-7 is listed on Canada's DSL List.

Canada - WHMIS: This product has a WHMIS classification of D2B.

Canadian Ingredient Disclosure List:

Exposure Limits:

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 1

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

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