

Material Safety Data Sheet

Diethyldithiocarbamic acid, sodium salt, trihydrate

ACC# 01915

Section 1 - Chemical Product and Company Identification

MSDS Name: Diethyldithiocarbamic acid, sodium salt, trihydrate

Catalog Numbers: AC211610000, AC211611000, AC211615000, AC424310000, AC424310050, AC424311000, AC424315000, S287-100

Synonyms: Sodium diethyldithiocarbamate trihydrate; Diethylcarbamodithioic acid sodium salt trihydrate; Dithiocarb trihydrate; DTC trihydrate; DDC trihydrate; DEDC trihydrate; DDTC trihydrate; DeDTC trihydrate; chelating agent with strong affinity for Hg, Cu, Ni and Zn.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
20624-25-3	Sodium diethyldithiocarbamate trihydrate	>99	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: very slightly yellow crystalline powder.

Warning! Causes eye, skin, and respiratory tract irritation. May be harmful if swallowed. Hygroscopic (absorbs moisture from the air).

Target Organs: Respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation.

Ingestion: May be harmful if swallowed. Contact with stomach acid may liberate carbon disulfide which primarily affects the nervous, cardiovascular, and reproductive systems.

Inhalation: Causes respiratory tract irritation.

Chronic: May cause reproductive and fetal effects. Prolonged or repeated exposure affects the nervous system.

Section 4 - First Aid Measures

Eyes: 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. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

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 Fighting Measures

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 available.

Explosion Limits, Lower: N/A

Upper: N/A

NFPA Rating: (estimated) Health: 2; 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. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage: Store in a cool, dry place. Keep container closed when not in use. Store protected from moisture. Refrigeration has been recommended.

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
Sodium diethyldithiocarbamate trihydrate	none listed	none listed	none listed
Sodium diethyldithiocarbamate, anhydrous	none listed	none listed	none listed

OSHA Vacated PELs: Sodium diethyldithiocarbamate trihydrate: No OSHA Vacated PELs are listed for this chemical. Sodium diethyldithiocarbamate, anhydrous: 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: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Appearance: very slightly yellow

Odor: Not available.

pH: 11.6 (10% aq soln)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 95 - 98.5 deg C

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: C₅H₁₀NNaS₂·2H₂O

Molecular Weight: 225.31

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Dust generation, moisture, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong acids.

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:

CAS# 20624-25-3: EZ6550000

CAS# 148-18-5: EZ6475000

LD50/LC50:

CAS# 20624-25-3:

Oral, mouse: LD50 = 1500 mg/kg;

Oral, rat: LD50 = 1500 mg/kg;

CAS# 148-18-5:

Oral, mouse: LD50 = 1500 mg/kg;

Oral, rabbit: LD50 = 500 mg/kg;

Oral, rat: LD50 = 1500 mg/kg;

Skin, rat: LD50 = >1 gm/kg;

Carcinogenicity:

CAS# 20624-25-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 148-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Based on the results of studies of workers exposed to carbon disulfide & supporting data from animal studies, the nervous system appears to be the critical target for carbon disulfide-induced toxicity, manifested most often as reduced conduction velocity in the peripheral nerves & impaired performance in psychomotor testing. Other effects for which there is considerable weight of evidence in humans exposed to CS₂ include alterations in serum lipids & blood pressure that are associated with increased risk of cardiovascular disease, systemic ophthalmological effects, including those on color vision and damage to the blood vessels of the retina, and (with higher exposures) increased mortality from heart disease.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	Not regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 20624-25-3 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 148-18-5 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.

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 # 20624-25-3: immediate.

CAS # 148-18-5: immediate.

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# 20624-25-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 148-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

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

Risk Phrases:

R 22 Harmful if swallowed.

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 20624-25-3: 2

CAS# 148-18-5: 3

Canada - DSL/NDSL

CAS# 148-18-5 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 10/15/1998

Revision #4 Date: 6/07/2006

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.