

MSDS# 04280

Section 1 - Chemical Product and Company Identification

MSDS Name: Carbon disulfide
Catalog Numbers: C183-212, C184-212, C184-500, C185-500, C573-500
Synonyms: Carbon bisulfide; Dithiocarbonic anhydride; Sulphocarbonic anhydride.
Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 75-15-0
Chemical Name: Carbon disulfide
%: >99
EINECS#: 200-843-6

Hazard Symbols:

T F



Risk Phrases:

11 36/38 48/23 62 63

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! This substance has caused adverse reproductive and fetal effects in animals. Aspiration hazard if swallowed. Can enter lungs and cause damage. Harmful if swallowed, inhaled, or absorbed through the skin. Stench. May cause nervous system effects. Extremely flammable liquid and vapor. Vapor may cause flash fire. Causes eye, skin, and respiratory tract irritation. May increase risk of cardiovascular disease. Target Organs: Cardiovascular system, nervous system, reproductive system.

Potential Health Effects

Eye: May cause severe eye irritation.

Skin: Causes skin irritation. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Dermatitis and vesiculation may result from skin contact with the vapor or liquid.

Ingestion: May cause digestive tract disturbances. May cause effects similar to those for inhalation exposure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. Can cause nervous system damage. Ingestion may cause convulsions, seizures and possible coma.

Inhalation: Intoxication can involve all parts of the central and peripheral nervous systems including damage to the nerves with paresthesias, muscle weakness, unsteady gait, and tremors. Exposure may accelerate the development or worsen, coronary heart disease.

Chronic: Prolonged or repeated exposure can cause psychic abnormalities such as anxiety, depression and excitability. May cause reproductive and fetal effects. Chronic exposure may cause visual disturbances. Repeated exposure may cause central and peripheral nervous system damage and digestive tract disturbances. Chronic exposure may cause coronary heart disease.

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. Do NOT allow victim to rub eyes or keep eyes closed.

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. Destroy contaminated shoes.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Effects may be delayed. Observe patient.

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. Vapors may form an explosive mixture with air. Combustion generates toxic fumes. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. May be ignited by friction, heat, sparks, or flame. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. May accumulate static electricity. Because of the very low autoignition temperature, ignition is easily accomplished by contact with hot surfaces such as light bulbs, steam pipes, or engine exhaust pipes.

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

Autoignition Temperature: 90 deg C (194.00 deg F)

Flash Point: -30 deg C (-22.00 deg F)

Explosion Limits: Lower: 1.3%

Explosion Limits: Upper: 50.0%

NFPA Rating: health: 3; flammability: 4; instability: 0;

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation. Evacuate unnecessary personnel. Approach spill from upwind. Use only non-sparking tools and equipment. Control runoff and isolate discharged material for proper disposal. Use water spray to cool and disperse vapors and protect personnel.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Do not breathe vapor. Use only with adequate ventilation. Keep away from heat, sparks and flame.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Keep under a nitrogen blanket. Store protected from heat and direct sunlight.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Carbon disulfide	1 ppm; Skin - potential	1 ppm TWA; 3 mg/m3 TWA 500	20 ppm TWA; 30 ppm Ceiling

	significant	ppm IDLH	
	contribution to		
	overall exposure		
	by the cutaneous		
	route		

OSHA Vacated PELs: Carbon disulfide: 4 ppm TWA; 12 mg/m3 TWA

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

Respirators: 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: Liquid

Color: clear, colorless to pale yellow

Odor: strong odor - rotten egg-like - stench

pH: Not available

Vapor Pressure: 297.5 mm Hg @ 20 deg C

Vapor Density: 2.67 (Air=1)

Evaporation Rate: 22.6 (Butyl acetate=1)

Viscosity: 0.363 cps @ 20 deg C

Boiling Point: 46 deg C (114.80°F)

Freezing/Melting Point: -111 deg C (-167.80°F)

Decomposition Temperature: Not available

Solubility in water: 0.294% @ 20°C

Specific Gravity/Density: 1.262 (Water=1)

Molecular Formula: CS2

Molecular Weight: 76.13

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures. Exposure to ultraviolet radiation from sunlight may cause carbon disulfide vapor to ignite and explode.

Conditions to Avoid: Ignition sources, friction, heat, extreme temperatures, confined spaces, direct sunlight..

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents, alkali metals, amines, halogens, azides, chemically active metals, air and rust.

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

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 75-15-0: FF6650000

RTECS:

CAS# 75-15-0: Inhalation, mouse: LC50 = 10 gm/m3/2H;

Inhalation, mouse: LC50 = 10000 mg/m3;

Inhalation, rat: LC50 = 25 gm/m3/2H;

Inhalation, rat: LC50 = 25000 mg/m3;

LD50/LC50:

Inhalation, rat: LC50 = 1000 mg/m3;

Oral, mouse: LD50 = 2780 mg/kg;

Oral, rabbit: LD50 = 2550 mg/kg;

Oral, rat: LD50 = 1200 mg/kg;

Carcinogenicity: Carbon disulfide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: CARBON DISULFIDE

Hazard Class: 3

UN Number: UN1131

Packing Group: I

Canada TDG

Shipping Name: CARBON DISULFIDE (FLASHPOINT -30C)

Hazard Class: 3.61

UN Number: UN1131

Packing Group: I

USA RQ: CAS# 75-15-0: 100 lb final RQ; 45.4 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T F

Risk Phrases:

R 11 Highly flammable.

R 36/38 Irritating to eyes and skin.

R 48/23 Toxic : danger of serious damage to health by prolonged exposure through inhalation.

R 62 Possible risk of impaired fertility.

R 63 Possible risk of harm to the unborn child.

Safety Phrases:

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 36/37 Wear suitable protective clothing and gloves.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 75-15-0: 2

Canada

CAS# 75-15-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: B2, D1B, D2A, 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.

CAS# 75-15-0 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 75-15-0 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 4/28/1999

Revision #6 Date 7/20/2009

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 the company 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 the company has been advised of the possibility of such damages.
