

SIGMA-ALDRICH**Material Safety Data Sheet**Version 3.0
Revision Date 07/20/2007
Print Date 07/15/2010**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : **Carbon disulfide**

Product Number : 335266
Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832
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Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : CS₂
Molecular Weight : 76.14 g/mol

CAS-No.	EC-No.	Index-No.	Concentration [%]
Carbon disulphide			
75-15-0	200-843-6	006-003-00-3	-

3. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

Flammable Liquid
Delayed target organ effects
Irritant
Reproductive hazard

Target Organs

Eyes, Nerves., Liver, Kidney, Heart, Cardiovascular system., Male reproductive system., Female reproductive system.

HMIS Classification

Health Hazard: 2
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health Hazard: 2
Fire : 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation
Skin
Eyes
Ingestion

May be harmful if inhaled. Causes respiratory tract irritation.
May be harmful if absorbed through skin. Causes skin irritation.
Causes eye irritation.
May be harmful if swallowed.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point -30 °C (-22 °F) - closed cup

Ignition temperature 100 °C (212 °F)

Suitable extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Specific hazards

Flash back possible over considerable distance. Container explosion may occur under fire conditions. Vapours may form explosive mixture with air. May explode when heated.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Refrigerate before opening.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Carbon disulphide	75-15-0	TWA	1 ppm	2005-12-09	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
		TWA	31 mg/m ³	1994-09-01	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
Remarks	Substances for which there is a Biological Exposure Index or Indices. Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.				
		TWA	4 ppm 12 mg/m ³	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
	See Table Z-2.				
		STEL	12 ppm 36 mg/m ³	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
	See Table Z-2.				
		TWA	20 ppm	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration; (OSHA) Standards, Toxic and Hazardous Substances, Subpart Z 29

					CFR Part 1910.1000, Table Z-2
	(Z37.3-1968)				
		CEIL	30 ppm	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration; (OSHA) Standards, Toxic and Hazardous Substances, Subpart Z 29 CFR Part 1910.1000, Table Z-2
	(Z37.3-1968)				
		AMP	100 ppm	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration; (OSHA) Standards, Toxic and Hazardous Substances, Subpart Z 29 CFR Part 1910.1000, Table Z-2
	(Z37.3-1968)				

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	liquid
Colour	colourless
Odour	Stench.

Safety data

pH	no data available
Melting point	-112 - -111 °C (-170 - -168 °F)
Boiling point	46 °C (115 °F)
Flash point	-30 °C (-22 °F) - closed cup

Ignition temperature	100 °C (212 °F)
Lower explosion limit	1.3 %(V)
Upper explosion limit	50 %(V)
Vapour pressure	394.956 hPa (296.241 mmHg) at 20 °C (68 °F) 1,342.711 hPa (1,007.116 mmHg) at 55 °C (131 °F)
Density	1.266 g/cm3
Water solubility	no data available
Partition coefficient: n-octanol/water	log Pow: 2.16
Vapour density	2.63 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Alkali metals, Zinc, Amines, Azides, Oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.

Carbon oxides, Sulphur oxides

Hazardous reactions

Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

no data available

Irritation and corrosion

no data available

Sensitisation

no data available

Chronic exposure

Laboratory experiments have shown mutagenic effects.

May cause reproductive disorders.

Signs and Symptoms of Exposure

May cause convulsions.

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.

**Ingestion
Target Organs**

May be harmful if swallowed.
Eyes, Nerves., Liver, Kidney, Heart, Cardiovascular system., Male reproductive system., Female reproductive system.,

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

Toxicity to fish LC50 - other fish - 162 mg/l - 96 h

Toxicity to algae

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1131 Class: 3 (6.1) Packing group: I
Proper shipping name: Carbon disulfide

IMDG

UN-Number: 1131 Class: 3 (6.1) Packing group: I EMS-No: F-E, S-D
Proper shipping name: CARBON DISULPHIDE
Marine pollutant: No

IATA

UN-Number: 1131 Class: 3 (6.1)
Proper shipping name: Carbon disulphide
IATA Passenger: Not permitted for transport
IATA Cargo: Not permitted for transport

15. REGULATORY INFORMATION

OSHA Hazards

Flammable Liquid, Delayed target organ effects, Irritant, Reproductive hazard

TSCA Status

On TSCA Inventory

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

Carbon disulphide

CAS-No.
75-15-0

Revision Date
1987-01-01

SARA 313 Components

CAS-No.

Revision Date

Carbon disulphide

75-15-0

1987-01-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Carbon disulphide

CAS-No.
75-15-0

Revision Date
1987-01-01

Pennsylvania Right To Know Components

Carbon disulphide

CAS-No.
75-15-0

Revision Date
1987-01-01

New Jersey Right To Know Components

Carbon disulphide

CAS-No.
75-15-0

Revision Date
1987-01-01

California Prop. 65 Components

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Carbon disulphide

CAS-No.
75-15-0

Revision Date
1989-07-01

16. OTHER INFORMATION

Further information

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