

CARBON DISULFIDE

PRODUCT IDENTIFICATION

CAS NO.	75-15-0, 355120-85-3	<chem>s=C=S</chem>
EINECS NO.	200-843-6	
FORMULA	CS ₂	
MOL WT.	76.14	
H.S. CODE	2813.10.0000	
TOXICITY	Oral rat LD50: 1200 mg/kg	
SYNONYMS	Carbon Bisulfide; Carbon Bisulphide; Carbon Disulfide; Carbon Sulphide; Sulfure De Carbone (French); Solfuro Di Carbonio (Italian); Dithiocarbonic Anhydride; Schwefelkohlenstoff Kohlendisulfide (German); Zwavelkoolstof Koolstofdisulfide (Dutch); Schwefelkohlenstoff (German); Sulphocarbonic Anhydride; Węgla Dwusiarczek (Polish); Carbon disulfide;	
SMILES	C(=S)=S	
CLASSIFICATION	Fungicide, bactericide, Preservative, Solvent	
EXTRA NOTES	UN1131 [Flammable liquid] Poison/Deleterious Substance Code: 2 A colorless, flammable, poisonous liquid, CS ₂ . It is used as a solvent, and is a counterirritant and has local anesthetic properties but is not used as such. It is highly toxic with pronounced CNS, hematologic, and dermatologic effects.	

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Clear, colorless liquid
MELTING POINT	-110 C
BOILING POINT	46.5 C
SPECIFIC GRAVITY	1.263
SOLUBILITY IN WATER	2.9 g/l at 20 C
SOLVENT SOLUBILITY	miscible with anhydrous methanol
pH	
VAPOR DENSITY	2.67
AUTOIGNITION	125 C
NFPA RATINGS	Health: 3; Flammability: 4; Reactivity: 0
REFRACTIVE INDEX	1.6270
FLASH POINT	-30 C
STABILITY	Stable under ordinary conditions

GENERAL DESCRIPTION & APPLICATIONS

[Wikipedia Linking](#)

[Material Safety Data Sheet \(Arkema\)](#)

[Google Scholar Search](#)

<http://www.npi.gov.au/>

Carbon disulfide is made for commercial use by combining carbon and sulfur at very high temperatures. It has been an important industrial chemical since the 1800s because of its many useful properties, including its ability to solubilise fats, rubbers, phosphorus, sulfur, and other elements. Its fat-solvent properties also make it indispensable in preparing fats, lacquers, and camphor; in refining petroleum jelly and paraffin; and in extracting oil from bones, palmstones,

olives, and rags. It was also used in processing India rubber sap from tropical trees. In all these extraction processes, it has now been replaced by other solvents. Carbon disulfide's most important industrial use has been in the manufacture of regenerated cellulose rayon (by the viscose process) and cellophane. Another principal industrial use for carbon disulfide has been as a feedstock for carbon tetrachloride production. It has also been used to protect fresh fruit from insects and fungus during shipping, in adhesives for food packaging, and in the solvent extraction of growth inhibitors. Carbon disulfide has been highly suitable for other industrial applications including the vulcanisation and manufacture of rubber and rubber accessories; the production of resins, xanthates, thiocyanates, plywood adhesives, and flotation agents; solvent and spinning-solution applications, primarily in the manufacture of rayon and polymerisation inhibition of vinyl chloride; conversion and processing of hydrocarbons; petroleum-well cleaning; brightening of precious metals in electroplating; rust removal from metals; and removal and recovery of metals and other elements from waste water and other media. In agriculture, carbon disulfide has been widely used as a fumigant to control insects in stored grain, and to remove botfly larva infestations from the stomachs of horses and ectoparasites from swine. Use of carbon disulfide as a grain fumigant in the USA was voluntarily cancelled after 1985.

<http://www.inchem.org/>

The principal industrial uses of carbon disulfide are the manufacture of viscose rayon, cellophane film, carbon tetrachloride and xanthogenates and electronic vacuum tube (Greenwood & Earnshaw, 1984 & Merck Index 1989). Carbon disulfide is also used as an insecticide for the fumigation of grains, nursery stock, in fresh fruit conservation and as a soil disinfectant against insects and nematodes (British Crop Protection Council, 1987). Carbon disulfide is a solvent for phosphorous, sulfur, selenium, bromine, iodine, fats, resins, rubber (Merck, 1987). Used for fumigation in airtight storage warehouses, airtight flat storages, bins, grain elevators, railroad box cars, shipholds, barges and cereal mills.

Local:

Carbon Disulfide, also called carbon bisulphide and dithiocarbonic anhydride, is a colorless, flammable and poisonous liquid with strong disagreeable chloroform-like odor. It is sparingly soluble in water (0.1% at room temperature) but is miscible in hydrocarbons and ether. Carbon disulfide is extremely hazardous as it is extremely inflammable and evaporates rapidly at room temperature (lower limit : 1.25%, upper limit : 50%). It is prepared from preheated hydrocarbons (natural gas) with vaporized sulfur in the presence of a catalyst. One of the most important use of carbon disulfide in industry is in the production of viscose rayon fibers, which are used to produce rayon filament yarn, rayon tire yarn, rayon stable fibre and cellophane film. It is widely used in the industrial fields of refining rubber, flotation agent, rubber chemicals, regenerated cellulophane.

SALES SPECIFICATION

APPEARANCE	clear liquid
CONCENTRATION	99.5% min
DENSITY	1.262 - 1.267 at 20 C
DISTILLATION RESIDUE	0.1% max
SULFURIC ACID	1ppm max

TRANSPORTATION

PACKING	Iso-tank, 240kgs in drum
HAZARD CLASS	3, 6.1 (Packing group:I)
UN NO.	1131

SAFETY INFORMATION

Hazard Symbols: F T, Risk Phrases: 11-36/38-48/23-62-63, Safety Phrases: 9-16-26-33-36/37-45

PRICE INFORMATION

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