



Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name	Carbon Disulfide, GR	Product Code	CX0395
Manufacturer	EMD Chemicals Inc. P.O. Box 70 480 Democrat Road Gibbstown, NJ 08027 Prior to January 1, 2003 EMD Chemicals Inc. was EM Industries, Inc. or EM Science, Division of EM Industries, Inc.	Effective Date	5/4/2005
		Print Date	5/6/2005

For More Information Call

856-423-6300 Technical Service
Monday-Friday: 8:00 AM - 5:00 PM

In Case of Emergency Call

800-424-9300 CHEMTREC (USA)
613-996-6666 CANUTEC (Canada)
24 Hours/Day: 7 Days/Week

Synonym Carbon Bisulfide

Material Uses Analytical reagent.

Chemical Family Solvent.

Section 2. Composition and Information on Ingredients

Component	CAS #	% by Weight
Carbon Disulfide	75-15-0	100

Section 3. Hazards Identification

Physical State and Appearance Liquid. (Colorless.)

Emergency Overview DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR.
VAPOR MAY CAUSE FLASH FIRE.
LIQUID OR VAPOR MAY IGNITE WHEN EXPOSED TO ANY SOURCE OF HEAT, EVEN HEAT FROM A LIGHT BULB.
MAY BE FATAL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
BIRTH DEFECT HAZARD.
CAN CAUSE BIRTH DEFECTS.
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, REPRODUCTIVE SYSTEM, LIVER, PERIPHERAL NERVOUS SYSTEM, SKIN, EYES, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Routes of Entry Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects

Eyes Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching.

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Skin Extremely hazardous in case of skin contact (permeator). May be fatal if absorbed. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation Extremely hazardous in case of inhalation. May be fatal if inhaled. Hazardous in case of inhalation (lung irritant).

Ingestion Extremely hazardous in case of ingestion. May be fatal if swallowed.

Potential Chronic Health Effects

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

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

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Section 5. Fire Fighting Measures

Flammability of the Product Product will burn.

Auto-ignition Temperature 90.05°C (194.1°F)

Flash Points Closed cup: -30.1°C (-22.2°F).

Flammable Limits LOWER: 1.3% UPPER: 50%

Products of Combustion Not available.

Fire Hazards in Presence of Various Substances Extremely flammable in presence of open flames, sparks and static discharge, of shocks, of heat, of oxidizing materials.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of static discharge:
Extremely flammable in presence of open flames, sparks and static discharge.
Extremely explosive in presence of open flames, sparks and static discharge.

Risks of explosion of the product in presence of mechanical impact:
Extremely flammable in presence of shocks.
Extremely explosive in presence of shocks.

Fire Fighting Media and Instructions SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

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Protective Clothing (Fire) Be sure to use an approved/certified respirator or equivalent.

Special Remarks on Fire Hazards Vapor may travel considerable distance to source of ignition and flash back.

Special Remarks on Explosion Hazards Not available.

Section 6. Accidental Release Measures

Small Spill and Leak Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill and Leak Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Spill Kit Information The following EMD Chemicals Inc. SpillSolv® absorbent is recommended for this product: SX1330 Solvent Treatment Kit

Section 7. Handling and Storage

Handling Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Avoid breathing vapors or spray mists. Do not get in eyes, on skin, or on clothing. Do not ingest.

Storage Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection

Eyes Splash goggles.

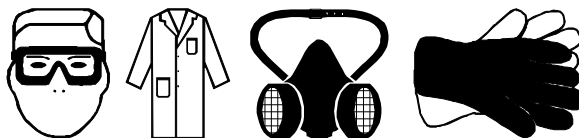
Body Lab coat.

Respiratory Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Hands Gloves.

Feet Not applicable.

Protective Clothing (Pictograms)



Personal Protection in Case of a Large Spill Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name

Exposure Limits

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Carbon Disulfide

AUVA (Austria, 1995). Skin

Spitzenbegrenzung: 60 mg/m³ 4 times per shift, 30 minute(s).

Spitzenbegrenzung: 20 ppm 4 times per shift, 30 minute(s).

TWA: 30 mg/m³ 8 hour(s).

TWA: 10 ppm 8 hour(s).

Belgium Minister of Labour (Belgium, 1998). Skin

VL: 31 mg/m³ 8 hour(s).

VL: 10 ppm 8 hour(s).

BAUA (Germany, 1997). Skin

Spitzenbegrenzung: 120 mg/m³

Spitzenbegrenzung: 40 ppm

TWA: 30 mg/m³ 8 hour(s).

TWA: 10 ppm 8 hour(s).

DK-Arbejdstyilsinet (Denmark, 1996). Skin

GV: 15 mg/m³ 8 hour(s).

GV: 5 ppm 8 hour(s).

Tyterveyslaitos (Finland, 1998).

TWA: 16 mg/m³ 8 hour(s).

TWA: 5 ppm 8 hour(s).

INRS (France, 1996).

VLE: 75 mg/m³ 15 minute(s).

VLE: 25 ppm 15 minute(s).

VME: 30 mg/m³ 8 hour(s).

VME: 10 ppm 8 hour(s).

National Authority for Occupational Safety/Health (Ireland, 1999). Skin

OEL: 30 mg/m³ 8 hour(s).

OEL: 10 ppm 8 hour(s).

Arbeidsinspectie (Netherlands, 1999). Skin

TGG 8 uur: 30 mg/m³ 8 hour(s).

TGG 8 uur: 10 ppm 8 hour(s).

N-Arbejdstyilsinet (Norway, 1996). Skin

AN: 15 mg/m³ 8 hour(s).

AN: 5 ppm 8 hour(s).

EH40-MEL (United Kingdom (UK), 1997). Skin

TWA: 32 mg/m³ 8 hour(s).

TWA: 10 ppm 8 hour(s).

ACGIH (United States, 1994). Skin

TWA: 31 mg/m³ 8 hour(s).

TWA: 10 ppm 8 hour(s).

NIOSH REL (United States, 1994). Skin

STEL: 30 mg/m³ 15 minute(s).

STEL: 10 ppm 15 minute(s).

TWA: 3 mg/m³ 10 hour(s).

TWA: 1 ppm 10 hour(s).

OSHA Final Rule (United States, 1989). Skin

STEL: 36 mg/m³ 15 minute(s).

STEL: 12 ppm 15 minute(s).

TWA: 12 mg/m³ 8 hour(s).

TWA: 4 ppm 8 hour(s).

OSHA Transitional Rule (United States, 1993).

AMP: 100 ppm 30 minute(s).

CEIL: 30 ppm

TWA: 20 ppm 8 hour(s).

Section 9. Physical and Chemical Properties

Odor	Unpleasant. Garlic.
Color	Not available.
Physical State and Appearance	Liquid. (Colorless.)
Molecular Weight	76.13 g/mole
Molecular Formula	C-S ₂
pH	Not available.
Boiling/Condensation Point	46.17°C (115.1°F)
Melting/Freezing Point	-111.61°C (-168.9°F)
Critical Temperature	272.9°C (523.2°F)
Specific Gravity	1.26 (Water = 1)
Vapor Pressure	Not available.
Vapor Density	2.6 (Air = 1)
Odor Threshold	0.21 ppm
Evaporation Rate	10.9 compared to(n-BUTYL ACETATE=1)
LogK_{ow}	Not available.
Solubility	Partially soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Highly reactive with oxidizing agents, metals.
Rem/Incompatibility	Not available.
Hazardous Decomposition Products	carbon oxides (CO, CO ₂) , sulfur oxides (SO ₂ , SO ₃ ...)
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

RTECS Number:	Carbon Disulfide	FF6650000
Toxicity	Acute oral toxicity (LD ₅₀): 1200 mg/kg [Rat].	
Chronic Effects on Humans	TERATOGENIC EFFECTS: Classified 3 by European Union. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN].	

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Acute Effects on Humans Hazardous in case of eye contact (irritant). Inflammation of the eye is characterized by redness, watering, and itching. Extremely hazardous in case of skin contact (permeator). May be fatal if absorbed. Hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering. Extremely hazardous in case of inhalation. May be fatal if inhaled. Hazardous in case of inhalation (lung irritant). Extremely hazardous in case of ingestion. May be fatal if swallowed.

Synergetic Products (Toxicologically) Not available.

Irritancy Draize Test: Not available.

Sensitization Not available.

Carcinogenic Effects This material is not known to cause cancer in animals or humans.

Toxicity to Reproductive System Classified Reproductive system/toxin/female, Reproductive system/toxin/male [PROVEN].

Teratogenic Effects Classified 3 by European Union.

Mutagenic Effects Tests on laboratory animals for mutagenic effects are cited in Registry of Toxic Effects of Chemical Substances (RTECS).

Section 12. Ecological Information

Ecotoxicity Not available.

BOD5 and COD Not available.

Toxicity of the Products of Biodegradation The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

EPA Waste Number P022 D001

Treatment Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

Section 14. Transport Information

DOT Classification Proper Shipping Name: CARBON DISULFIDE
Hazard Class: 3
UN number: UN1131
Packing Group: I
RQ: 100 lbs. (45.36 kg)

TDG Classification Not available.

IMO/IMDG Classification Proper Shipping Name: CARBON DISULPHIDE
Hazard Class: 3
UN number: UN1131
Packing Group: I
RQ: 100

ICAO/IATA Classification Not available.

Section 15. Regulatory Information

U.S. Federal Regulations TSCA 8(a) PAIR: Carbon Disulfide
 TSCA 8(b) inventory: Carbon Disulfide
 SARA 302/304/311/312 extremely hazardous substances: Carbon Disulfide
 SARA 302/304 emergency planning and notification: Carbon Disulfide
 SARA 302/304/311/312 hazardous chemicals: Carbon Disulfide
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Carbon Disulfide:
 Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
 SARA 313 toxic chemical notification and release reporting: Carbon Disulfide
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: Carbon Disulfide
 Clean air act (CAA) 112 accidental release prevention: Carbon Disulfide
 Clean air act (CAA) 112 regulated flammable substances: No products were found.
 Clean air act (CAA) 112 regulated toxic substances: Carbon Disulfide

WHMIS (Canada) CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
 Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).

CEPA DSL: Carbon Disulfide

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

International Regulations

EINECS Carbon Disulfide 200-843-6

DSCL (EEC) R11- Highly flammable.
 R22- Harmful if swallowed.
 R37/38- Irritating to respiratory system and skin.
 R41- Risk of serious damage to eyes.

International Lists Australia (NICNAS): Carbon Disulfide

Japan (MITI): Carbon Disulfide

Korea (TCCL): Carbon Disulfide

Philippines (RA6969): Carbon Disulfide

China: No products were found.

State Regulations

Pennsylvania RTK: Carbon Disulfide: (environmental hazard, generic environmental hazard)

Massachusetts RTK: Carbon Disulfide

New Jersey: Carbon Disulfide

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Carbon Disulfide

California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (female) which would require a warning under the statute: Carbon Disulfide

California prop. 65: This product contains the following ingredients for which the State of California has found to cause reproductive harm (male) which would require a warning under the statute: Carbon Disulfide

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: Carbon Disulfide

Section 16. Other Information

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



Changed Since Last
Revision

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Notice to Reader

The statements contained herein are based upon technical data that EMD Chemicals Inc. believes to be reliable, are offered for information purposes only and as a guide to the appropriate precautionary and emergency handling of the material by a properly trained person having the necessary technical skills. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use, storage and disposal of these materials and the safety and health of employees and customers and the protection of the environment. EMD CHEMICALS INC. MAKES NO REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, WITH RESPECT TO THE INFORMATION HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS.