

SAFETY DATA SHEET

Creation Date 11-November-2010

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Revision Number 9

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

1. Identification

Product Name Carbon disulfide

Cat No. : AC445660000; AC445660010; AC445660025; AC445661000

CAS-No 75-15-0
Synonyms No information available

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Manufacturer

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

WHMIS 2015 Classification

This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

Flammable liquids	Category 2
Acute Inhalation Toxicity	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
Reproductive Toxicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 1
Target Organs - Liver, Kidney.	

Label Elements

Signal Word

Danger

Hazard Statements

Highly flammable liquid and vapor

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

May cause drowsiness and dizziness

Suspected of damaging fertility. Suspected of damaging the unborn child

Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Ground and bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting/equipment

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Use non-sparking tools

Take action to prevent static discharges

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

IF exposed or concerned: Get medical advice/attention

If skin irritation occurs: Get medical advice/attention

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Take off contaminated clothing and wash it before reuse

Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Stench

Contains a known or suspected endocrine disruptor

3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Carbon disulfide	75-15-0	>95

4. First-aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Inhalation	Remove to fresh air. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.
Most important symptoms/effects	Difficulty in breathing. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Water spray, carbon dioxide (CO ₂), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
Unsuitable Extinguishing Media	Water may be ineffective
Flash Point	-30 °C / -22 °F
Method -	No information available
Autoignition Temperature	100 °C / 212 °F
Explosion Limits	
Upper	60 vol %
Lower	1 vol %
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. Extremely flammable. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Sulfur oxides.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

Health
3

Flammability
4

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Keep
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Environmental Precautions

people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7. Handling and storage

Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

Storage.

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Incompatible Materials. Amines. Halogens. Fluorine. Metals. copper. Butyl rubber. Oxidizing agent.

8. Exposure controls / personal protection

Exposure Guidelines

Component	Alberta	British Columbia	Ontario TWAEV	Quebec
Carbon disulfide	TWA: 1 ppm TWA: 3.1 mg/m ³ Skin	TWA: 4 ppm STEL: 12 ppm Skin	TWA: 1 ppm Skin	TWA: 1 ppm Skin

Component	Manitoba	New Brunswick	Newfoundland and Labrador	Nova Scotia
Carbon disulfide	TWA: 1 ppm Skin	TWA: 1 ppm Skin	TWA: 1 ppm Skin	TWA: 1 ppm Skin

Component	Nunavut	Prince Edward Island	Saskatchewan	Yukon
Carbon disulfide	TWA: 10 ppm STEL: 15 ppm Skin	TWA: 1 ppm	TWA: 10 ppm STEL: 15 ppm Skin	TWA: 20 ppm TWA: 60 mg/m ³ STEL: 30 ppm STEL: 90 mg/m ³ Skin

Component	ACGIH TLV	OSHA PEL	NIOSH
Carbon disulfide 75-15-0 (>95)	TWA: 1 ppm Skin	(Vacated) TWA: 4 ppm (Vacated) TWA: 12 mg/m ³ Ceiling: 30 ppm (Vacated) STEL: 12 ppm (Vacated) STEL: 36 mg/m ³ Skin TWA: 20 ppm	IDLH: 500 ppm REL = 1 ppm (TWA) REL = 3 mg/m ³ (TWA) STEL: 10 ppm STEL: 30 mg/m ³

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the

process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection
Hand Protection

Goggles
Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Viton (R)	See manufacturers recommendations	-	Splash protection only

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Recommended Filter type: low boiling organic solvent Type AX Brown conforming to EN371

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State

Liquid

Color

Colorless

Odor

Stench

Odor Threshold

No information available

Property

Values

Remarks

• Method

Melting Point/Range

-111 °C / -167.8 °F

Softening Point

No data available

Boiling Point/Range

46 °C / 114.8 °F

Flash Point

-30 °C / -22 °F

Flammability (liquid)

Highly flammable

Flammability (solid,gas)

Not applicable

Explosion Limits

Lower 0.6

Upper 60

Autoignition Temperature

100 - °C / 212 - °F

Decomposition Temperature

No data available

pH

No information available 5

Viscosity

0.363 cP at 20 °C

Water Solubility

Soluble

Solubility in other solvents

No information available

Partition Coefficient (n-octanol/water)

Component

log Pow

Carbon disulfide

1.9

Vapor Pressure	400 hPa @ 20 °C	
Density / Specific Gravity	1.262	
Bulk Density	Not applicable	Liquid
Vapor Density	2.67 (Air = 1.0)	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

Other Information

Molecular Formula	C S ₂
Molecular Weight	76.13
Explosive Properties	Vapors may form explosive mixtures with air

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions.
Conditions to Avoid	Excess heat. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Amines, Halogens, Fluorine, Metals, copper, Butyl rubber, Oxidizing agent
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Sulfur oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Information on expected route of exposure

Inhalation	May cause irritation of respiratory tract.
Ingestion	Ingestion may cause irritation to mucous membranes.
Eyes	Irritating to eyes. Contact with eyes may cause irritation.
Skin	Irritating to skin. May cause eye/skin irritation.

Toxicology data for the components

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Carbon disulfide	LD50 = 1200 mg/kg (Rat)	-	LC50 = 10.35 mg/L (Rat) 4 h

Toxicologically Synergistic Products	No information available
(b) skin corrosion/irritation;	Category 2
(c) serious eye damage/irritation;	Category 2
(d) respiratory or skin sensitization;	
Respiratory	Based on available data, the classification criteria are not met
Skin	Based on available data, the classification criteria are not met
(e) germ cell mutagenicity;	Based on available data, the classification criteria are not met
	Substances which cause concern for man owing to possible mutagenic effects but for which

the available information is not adequate for making a satisfactory assessment

(f) carcinogenicity;

Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Carbon disulfide	75-15-0	Not listed	Not listed	Not listed	Not listed	Not listed

(g) reproductive toxicity;

Category 2

(h) STOT-single exposure;

Based on available data, the classification criteria are not met

(i) STOT-repeated exposure;

Category 1

Target Organs

Central Vascular System (CVS), Peripheral Nervous System (PNS), Central nervous system (CNS), Kidney, Liver.

(j) aspiration hazard;

Based on available data, the classification criteria are not met

Other Adverse Effects

Teratogenic effects have occurred in experimental animals.

Symptoms / effects, both acute and delayed

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Other Adverse Effects

Teratogenic effects have occurred in experimental animals.

**Endocrine Disrupting Properties
Assess endocrine disrupting
properties for human health**

Contains a substance on the National Authorities Endocrine Disruptor Lists

Component	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Carbon disulfide	Group II Chemical	Not applicable	Not applicable

12. Ecological information

Ecotoxicity

The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Contains a substance which is: Toxic to aquatic organisms.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Carbon disulfide	Not listed	LC50: = 4 mg/L, 96h static (Poecilia reticulata) LC50: 3 - 5.8 mg/L, 96h semi-static (Poecilia reticulata)	EC50 = 260 mg/L 15 min	EC50: = 2.1 mg/L, 48h (Daphnia magna)

Persistence and Degradability

Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation

No information available.

Mobility

Will likely be mobile in the environment due to its volatility.

Component	log Pow
Carbon disulfide	1.9

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN1131
 Proper Shipping Name CARBON DISULFIDE
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group I

TDG

UN-No UN1131
 Proper Shipping Name CARBON DISULFIDE
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group I

IATA

FORBIDDEN FOR IATA TRANSPORT
 UN-No UN1131
 Proper Shipping Name CARBON DISULPHIDE FORBIDDEN FOR IATA TRANSPORT
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group I

IMDG/IMO

UN-No UN1131
 Proper Shipping Name CARBON DISULPHIDE
 Hazard Class 3
 Subsidiary Hazard Class 6.1
 Packing Group I

15. Regulatory information

International Inventories

Component	CAS-No	DSL	NDSL	TSCA	TSCA Inventory notification - Active-Inactive	EINECS	ELINCS	NLP
Carbon disulfide	75-15-0	X	-	X	ACTIVE	200-843-6	-	-

Component	CAS-No	IECSC	KECL	ENCS	ISHL	TCSI	AICS	NZIoC	PICCS
Carbon disulfide	75-15-0	X	KE-04755	X	X	X	X	X	X

Legend:

X - Listed '-' - Not listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

Component	Canada - National Pollutant Release Inventory (NPRI)	Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances	Canada's Chemicals Management Plan (CEPA)
Carbon disulfide	Part 1, Group A Substance Part 4 Substance		

Other International Regulations

Authorisation/Restrictions according to EU REACH

Component	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Carbon disulfide	-	Use restricted. See entry 75. (see link for restriction details)	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS-No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Carbon disulfide	75-15-0	Listed	Not applicable	Not applicable	Not applicable

Component	CAS-No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Carbon disulfide	75-15-0	Not applicable	Not applicable	Not applicable	Not applicable

16. Other information

Prepared By

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Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS