# SAFETY DATA SHEET

## 1. Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Carbon disulfide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat No. :</td>
<td>C183-212; C184-212; C184-500; C185-500; C573-500</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Carbon bisulfide; Dithiocarbonic anhydride; Sulphocarbonic anhydride.</td>
</tr>
<tr>
<td>Recommended Use</td>
<td>Laboratory chemicals.</td>
</tr>
</tbody>
</table>

### Synonyms
Carbon bisulfide; Dithiocarbonic anhydride; Sulphocarbonic anhydride.

### Recommended Use
Laboratory chemicals.

### Uses advised against
No Information available

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

### Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

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## 2. Hazard(s) identification

### Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin Corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Target Organs - Central nervous system (CNS).</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>Category 1</td>
</tr>
<tr>
<td>Target Organs - Liver, Kidney.</td>
<td></td>
</tr>
</tbody>
</table>

### Label Elements

<table>
<thead>
<tr>
<th>Signal Word</th>
<th>Danger</th>
</tr>
</thead>
</table>

### Hazard Statements
- Highly flammable liquid and vapor
- Harmful if inhaled
- Causes skin irritation
- Causes serious eye irritation
- Suspected of damaging fertility. Suspected of damaging the unborn child
- May cause drowsiness or dizziness
- 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
Use personal protective equipment as required
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/hot surfaces - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool
Response
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
If skin irritation occurs: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
Fire
In case of fire: Use CO2, dry chemical, or foam for extinction
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
Hazards not otherwise classified (HNOC)

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

### 3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>75-15-0</td>
<td>99</td>
</tr>
</tbody>
</table>

### 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. Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation
Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.

Ingestion
Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects
Breathing difficulties. 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
CO₂, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media
Water may be ineffective

Flash Point
-30 °C / -22 °F

Method -
No information available

Autoignition Temperature
90 °C / 194 °F

Explosion Limits
Upper 50.0 vol %
Lower 1.3 vol %

Sensitivity to Mechanical Impact
No information available

Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
Flammable. 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. 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.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>0</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Use personal protective equipment. Evacuate personnel to safe areas. Remove all sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing.

Environmental Precautions
Should not be released into the environment. See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system.

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

7. Handling and storage

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

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

8. Exposure controls / personal protection

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>TWA: 1 ppm</td>
<td>(Vacated) TWA: 4 ppm</td>
<td>IDLH: 500 ppm</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>(Vacated) TWA: 12 mg/m³</td>
<td>TWA: 1 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ceiling: 30 ppm</td>
<td>TWA: 3 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Vacated) STEL: 12 ppm</td>
<td>STEL: 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 36 mg/m³</td>
<td>STEL: 30 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 20 ppm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Quebec</th>
<th>Mexico OEL (TWA)</th>
<th>Ontario TWAEV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>TWA: 4 ppm</td>
<td>TWA: 1 ppm</td>
<td>TWA: 1 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA: 12 mg/m³</td>
<td>TWA: 3 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STEL: 12 ppm</td>
<td>STEL: 30 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>STEL: 36 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

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.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Strong</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-111 °C / -167.8 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>46 °C / 114.8 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-30 °C / -22 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>22.6 (Butyl Acetate = 1.0)</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>50.0 vol %</td>
</tr>
<tr>
<td>Lower</td>
<td>1.3 vol %</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Stable under normal conditions.

Conditions to Avoid

Incompatible Materials
Oxidizing agents, Amines, Halogens, Fluorine, Metals, copper, Butyl rubber

Hazardous Decomposition Products
Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides

Hazardous Polymerization
Hazardous polymerization does not occur.

Hazardous Reactions
None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>LD50 &gt; 2000 mg/kg ( Rat )</td>
<td>Not listed</td>
<td>LC50 = 10.35 mg/L (Rat) 4h</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>LC50 = 25 g/m³ ( Rat ) 2h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
Irritating to eyes and skin

Sensitization
No information available

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>75-15-0</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
No information available

Reproductive Effects
Experiments have shown reproductive toxicity effects on laboratory animals. Possible risk of harm to the unborn child. Possible risk of impaired fertility.

Developmental Effects
Component substance is listed on California Proposition 65 as a developmental hazard.

Teratogenicity
No information available.

STOT - single exposure
Central nervous system (CNS)

STOT - repeated exposure
Liver Kidney
Aspiration hazard

No information available

Symptoms / effects, both acute and delayed

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

Endocrine Disruptor Information

<table>
<thead>
<tr>
<th>Component</th>
<th>EU - Endocrine Disrupters Candidate List</th>
<th>EU - Endocrine Disruptors Evaluated Substances</th>
<th>Japan - Endocrine Disruptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>Group II Chemical</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Other Adverse Effects

Central nervous system.

12. Ecological information

Ecotoxicity

Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>EC50: = 21 mg/L, 96h (Chlorella pyrenoidosa)</td>
<td>LC50: = 4 mg/L, 96h static (Poecilia reticulata)</td>
<td>EC50 = 260 mg/L 15 min</td>
<td>EC50: = 2.1 mg/L, 48h (Daphnia magna)</td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>UN-No</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Subsidiary Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1131</td>
<td>CARBON DISULFIDE</td>
<td>3</td>
<td>6.1</td>
<td>I</td>
</tr>
</tbody>
</table>

TDG

<table>
<thead>
<tr>
<th>UN-No</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Subsidiary Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1131</td>
<td>CARBON DISULFIDE</td>
<td>3</td>
<td>6.1</td>
<td>I</td>
</tr>
</tbody>
</table>

IATA

<table>
<thead>
<tr>
<th>UN-No</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Subsidiary Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1131</td>
<td>FORBIDDEN FOR IATA TRANSPORT</td>
<td>3</td>
<td>6.1</td>
<td>I</td>
</tr>
</tbody>
</table>

IMDG/IMO

<table>
<thead>
<tr>
<th>UN-No</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Subsidiary Hazard Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1131</td>
<td>CARBON DISULFIDE</td>
<td>3</td>
<td>6.1</td>
<td>I</td>
</tr>
</tbody>
</table>

15. Regulatory information
International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>200-843-6</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Database Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>75-15-0</td>
<td>99</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard  Yes
Chronic Health Hazard Yes
Fire Hazard          Yes
Sudden Release of Pressure Hazard No
Reactive Hazard      No

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>X</td>
<td>100 lb</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Clean Air Act

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depleters</th>
<th>Class 2 Ozone Depleters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>100 lb</td>
<td>100 lb</td>
</tr>
</tbody>
</table>

California Proposition 65 This product contains the following proposition 65 chemicals

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>75-15-0</td>
<td>Developmental</td>
<td>Female Reproductive</td>
<td>Male Reproductive</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know
Carbon disulfide

Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security
This product contains the following DHS chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>DHS Chemical Facility Anti-Terrorism Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon disulfide</td>
<td>15000 lb STQ</td>
</tr>
</tbody>
</table>

Other International Regulations

Mexico - Grade
Serious risk, Grade 3

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
B2  Flammable liquid
D1B  Toxic materials
D2A  Very toxic materials
D2B  Toxic materials

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 16-Apr-2010
Revision Date 09-Oct-2015
Print Date 09-Oct-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer
The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS