

SAFETY DATA SHEET

Creation Date 11-Nov-2010

Revision Date 19-Jan-2018

Revision Number 5

1. Identification

Product Name Carbon disulfide

Cat No. : AC167710000; AC167710025; AC167710250; AC167711000;
AC167715000

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

Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company

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

Emergency Telephone Number

For information **US** call: 001-800-ACROS-01 / **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

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

| | |
|--|------------|
| Flammable liquids | Category 2 |
| Acute Inhalation Toxicity - Vapors | 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
Causes skin irritation
Causes serious eye irritation
Harmful if inhaled

May cause drowsiness or 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
 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)

Other hazards

Stench.

WARNING. Reproductive Harm - <https://www.p65warnings.ca.gov/>.

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 | Move 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 and 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 | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. 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 | 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. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. |
|-----------------------------|--|

Environmental Precautions 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. 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. 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 and sources of ignition.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|------------------|--------------------|---|---|--|
| Carbon disulfide | 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 TWA: 1 ppm TWA: 3 mg/m ³ STEL: 10 ppm STEL: 30 mg/m ³ | TWA: 10 ppm TWA: 30 mg/m ³ |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or 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.

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. Tightly fitting safety goggles. Face-shield.

Skin and body protection Long sleeved clothing.

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

| | |
|-----------------------|--------------------------|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | Stench |
| Odor Threshold | No information available |

| | |
|--|-----------------------------|
| pH | No information available 5 |
| Melting Point/Range | -111 °C / -167.8 °F |
| Boiling Point/Range | 46 °C / 114.8 °F @ 760 mmHg |
| Flash Point | -30 °C / -22 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | 60 vol % |
| Lower | 1 vol % |
| Vapor Pressure | 400 hPa @ 20 °C |
| Vapor Density | 2.67 (Air = 1.0) |
| Specific Gravity | 1.262 |
| Solubility | soluble |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 100 °C / 212 °F |
| Decomposition Temperature | No information available |
| Viscosity | 0.363 cP at 20 °C |
| Molecular Formula | C S ₂ |
| Molecular Weight | 76.13 |

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 | Oxidizing agents, Amines, Halogens, Fluorine, Metals, copper, Butyl rubber |
| 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

Acute Toxicity

Product Information Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|------------------|---------------------------|-------------|--|
| Carbon disulfide | LD50 = 1200 mg/kg (Rat) | Not listed | LC50 = 25 g/m ³ (Rat) 2 h |

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. |

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

Mutagenic Effects 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

| | |
|---|---|
| Reproductive Effects | No information available. |
| Developmental Effects | No information available. |
| 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

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

Other Adverse Effects Teratogenic effects have occurred in experimental animals.

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 | EC50: = 21 mg/L, 96h (Chlorella pyrenoidosa) | LC50: 3 - 5.8 mg/L, 96h semi-static (Poecilia reticulata) LC50: = 4 mg/L, 96h 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 |
| IMDG/IMO | |
| UN-No | UN1131 |
| Proper Shipping Name | CARBON DISULPHIDE |
| Hazard Class | 3 |
| Subsidiary Hazard Class | 6.1 |
| Packing Group | I |

15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

International Inventories

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|------------------|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Carbon disulfide | X | X | - | 200-843-6 | - | | X | X | X | X | X |

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 Data Base 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

| Component | CAS-No | Weight % | SARA 313 - Threshold Values % |
|------------------|---------|----------|-------------------------------|
| Carbon disulfide | 75-15-0 | >95 | 1.0 |

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Carbon disulfide | X | 100 lb | - | - |

Clean Air Act

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|------------------|-----------|-------------------------|-------------------------|
| Carbon disulfide | X | | - |

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)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|------------------|--------------------------|----------------|
| Carbon disulfide | 100 lb | 100 lb |

California Proposition 65

This product contains the following proposition 65 chemicals

| Component | CAS-No | California Prop. 65 | Prop 65 NSRL | Category |
|------------------|---------|---|--------------|---------------|
| Carbon disulfide | 75-15-0 | Developmental Female Reproductive Male Reproductive | - | Developmental |

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|------------------|---------------|------------|--------------|----------|--------------|
| Carbon disulfide | X | X | X | X | X |

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:

| Component | DHS Chemical Facility Anti-Terrorism Standard |
|------------------|---|
| Carbon disulfide | 15000 lb STQ |

Other International Regulations**Mexico - Grade** Serious risk, Grade 3**16. Other information**

Prepared By Regulatory Affairs
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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 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