



# SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Revision Date 05/27/2014

Version 1.1

## SECTION 1. Identification

### Product identifier

Product number	CX0396
Product name	Carbon Disulfide For HPLC, Spectrophotometry  and Gas Chromatography OmniSolv®
CAS-No.	75-15-0

### Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Reagent for analysis
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### Details of the supplier of the safety data sheet

Company	EMD Millipore Corporation   290 Concord Road, Billerica, MA 01821, United States of America   General Inquiries: +1-978-715-4321   Monday to Friday, 9:00 AM to 4:00 PM Eastern Time (GMT-5)
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Emergency telephone	800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week
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## SECTION 2. Hazards identification

### GHS Classification

Flammable liquid, Category 2, H225  
Reproductive toxicity, Category 2, H361fd  
Specific target organ systemic toxicity - repeated exposure, Category 1, Cardio-vascular system, Central nervous system, Eyes, Peripheral nervous system, H372  
Eye irritation, Category 2, H319  
Skin irritation, Category 2, H315

For the full text of the H-Statements mentioned in this Section, see Section 16.

### GHS-Labeling

*Hazard pictograms*



*Signal Word*  
Danger

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### *Hazard Statements*

H225 Highly flammable liquid and vapor.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H372 Causes damage to organs (Cardio-vascular system, Central nervous system, Eyes, Peripheral nervous system) through prolonged or repeated exposure.

### *Precautionary Statements*

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P281 Use personal protective equipment as required.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P403 + P235 Store in a well-ventilated place. Keep cool.

General hazard statement not specifying the route of exposure as the necessary information is not available. See Annex VI, 1.2.2

### **OSHA Hazards**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS and may deviate from the GHS information.

### **Other hazards**

None known.

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## **SECTION 3. Composition/information on ingredients**

Formula CS<sub>2</sub> (Hill)

Molar mass 76.13 g/mol

### **Hazardous ingredients**

*Chemical Name ( Concentration)*

CAS-No.

*carbon disulphide ( >= 90 % - <= 100 % )*

75-15-0

Exact percentages are being withheld as a trade secret.

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## **SECTION 4. First aid measures**

### **Description of first-aid measures**

*General advice*

First aider needs to protect himself.

*Inhalation*

After inhalation: fresh air. Call in physician.

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### *Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing. Get medical attention.

### *Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

### *Ingestion*

After swallowing: caution if victim vomits. Risk of aspiration! Keep airways free. Pulmonary failure possible after aspiration of vomit. Call a physician immediately.

Never give anything by mouth to an unconscious person.

### **Most important symptoms and effects, both acute and delayed**

respiratory paralysis, Cyanosis, narcosis, agitation, spasms, inebriation, Stomach/intestinal disorders, muscular symptoms, Tiredness, death

### **Indication of any immediate medical attention and special treatment needed**

No information available.

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## **SECTION 5. Fire-fighting measures**

### **Extinguishing media**

#### *Suitable extinguishing media*

Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder, Water

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### **Special hazards arising from the substance or mixture**

Combustible.

Vapors are heavier than air and may spread along floors.

Forms explosive mixtures with air at ambient temperatures.

Pay attention to flashback.

Development of hazardous combustion gases or vapors possible in the event of fire.

Fire may cause evolution of:

Sulfur oxides

### **Advice for firefighters**

#### *Special protective equipment for fire-fighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Suppress (knock down) gases/vapors/mists with a water spray jet. Cool closed containers exposed to fire with water spray.

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## **SECTION 6. Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert.

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Advice for emergency responders: Protective equipment see section 8.

## Environmental precautions

Do not empty into drains. Risk of explosion.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

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## SECTION 7. Handling and storage

### Precautions for safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture. Avoid generation of vapors/aerosols.

*Advice on protection against fire and explosion*

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

### Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

Store at room temperature.

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## SECTION 8. Exposure controls/personal protection

### Exposure limit(s)

#### Ingredients

Basis	Value	Threshold limits	Remarks
<i>carbon disulphide 75-15-0</i>			
ACGIH	Time Weighted Average (TWA): Skin designation:	1 ppm	Can be absorbed through the skin.
NIOSH/GUIDE	Recommended exposure limit (REL):	1 ppm 3 mg/m <sup>3</sup>	Can be absorbed through the skin.
	Skin designation:		
	Short Term Exposure Limit (STEL):	10 ppm 30 mg/m <sup>3</sup>	
Z1A	Short Term Exposure Limit (STEL):	12 ppm 36 mg/m <sup>3</sup>	
	Skin designation (Final Rule Limit applies):		Can be absorbed through the skin.
OSHA/Z2	Time Weighted Average (TWA):	4 ppm 12 mg/m <sup>3</sup>	
	Ceiling Limit Value:	20 ppm 30 ppm	
	Maximum concentration:	100 ppm	Ceiling Limit Value 30 minutes

### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

### Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

### Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

### Eye/face protection

Safety glasses

### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

### Other protective equipment:

Flame retardant antistatic protective clothing

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## *Respiratory protection*

required when vapors/aerosols are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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## **SECTION 9. Physical and chemical properties**

Physical state	liquid
Color	colorless
Odor	characteristic odor
Odor Threshold	1 - 2 ppm
pH	No information available.
Melting point	-111.6 °C
Boiling point/boiling range	115.7 °F ( 46.5 °C) at 1,013 hPa
Flash point	-22 °F ( -30 °C) Method: c.c.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	1 %(V)
Upper explosion limit	60 %(V)
Vapor pressure	398 hPa at 68 °F ( 20 °C)
Relative vapor density	2.63
Density	1.26 g/cm <sup>3</sup> at 68 °F ( 20 °C)
Relative density	No information available.
Water solubility	2.1 g/l at 68 °F ( 20 °C)
Partition coefficient: n-octanol/water	log Pow: 1.84 - 1.94 (Lit.) Bioaccumulation is not expected.

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Autoignition temperature	No information available.
Decomposition temperature	No information available.
Viscosity, dynamic	0.363 mPa.s at 68 °F ( 20 °C)
Explosive properties	Not classified as explosive.
Oxidizing properties	none
Ignition temperature	203 °F ( 95 °C)

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## SECTION 10. Stability and reactivity

### Reactivity

Vapors may form explosive mixture with air.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Risk of explosion with:

nitrogen oxides, permanganic acid, Oxidizing agents, halogen-halogen compounds, halogen oxides, Iron, ferric oxide, Chlorine, hydrazines, powdered aluminum, chlorine oxides, Potassium, potassium permanganate, Lithium, sodium, nitrogen dioxide, azides

Risk of ignition or formation of inflammable gases or vapors with:

Fluorine, phosphorus, sulfur, Activated charcoal, Powdered metals, Reducing agents

Exothermic reaction with:

Zinc, Acids

### Conditions to avoid

Warming.

### Incompatible materials

rubber, various plastics

### Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### Information on toxicological effects

*Likely route of exposure*

Inhalation, Eye contact, Skin contact

*Target Organs*

Peripheral nervous system

cardiovascular system

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Eyes  
Kidneys  
Liver  
Skin  
reproductive system

*Acute oral toxicity*

LD50 rat: 3,188 mg/kg (Lit.)

*Acute inhalation toxicity*

LCLO human: 12.66 mg/l; 30 min (RTECS)

LC50 rat: 25 mg/l; 2 h (RTECS)

*Acute dermal toxicity*

absorption

*Skin irritation*

rabbit

Result: Severe irritations  
(IUCLID)

Causes skin irritation.

*Eye irritation*

human

Result: Severe irritations  
(IUCLID)

Causes serious eye irritation.

*Genotoxicity in vitro*

Ames test

Result: negative

Method: OECD Test Guideline 471

Mutagenicity (mammal cell test): chromosome aberration.

Result: negative

(National Toxicology Program)

Mutagenicity (mammal cell test):

Result: positive

(National Toxicology Program)

*CMR effects*

Teratogenicity:

Suspected of damaging the unborn child.

Reproductive toxicity:

Suspected of damaging fertility.

*Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

*Specific target organ systemic toxicity - repeated exposure*

Target Organs: Peripheral nervous system, Central nervous system, Cardio-vascular system,

Eyes

Causes damage to organs through prolonged or repeated exposure.



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### *Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

### **Carcinogenicity**

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

### **Further information**

Systemic effects:

After uptake of large quantities:

inebriation, agitation, spasms, Unconsciousness, narcosis, respiratory paralysis, Cyanosis, drop in blood pressure, death

After long-term exposure to the chemical:

Tiredness, muscular symptoms

Neurotoxic effects.

After a latency period:

Stomach/intestinal disorders, psychoses, Changes in the blood count, Cardiac irregularities

Damage to:

Liver, Kidney

This substance should be handled with particular care.

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## **SECTION 12. Ecological information**

### **Ecotoxicity**

#### *Toxicity to fish*

LC50 *Poecilia reticulata* (guppy): 4 mg/l; 96 h

OECD Test Guideline 203

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 2.1 mg/l; 48 h

OECD Test Guideline 202

#### *Toxicity to algae*

IC50 *Chlorella pyrenoidosa*: 21 mg/l; 96 h

OECD Test Guideline 201

#### *Toxicity to bacteria*

microtox test EC50 *Photobacterium phosphoreum*: 341 mg/l; 15 min (IUCLID)

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## Persistence and degradability

### *Biodegradability*

80 %; 28 d

OECD Test Guideline 301D

Readily biodegradable.

### *Chemical Oxygen Demand (COD)*

1.47 mg/g

(IUCLID)

## Bioaccumulative potential

### *Partition coefficient: n-octanol/water*

log Pow: 1.84 - 1.94

(Lit.) Bioaccumulation is not expected.

## Mobility in soil

No information available.

## Other adverse effects

### *Henry constant*

1462 Pa\*m<sup>3</sup>/mol

Method: (experimental)

Distribution preferentially in air. (Lit.)

### *Stability in water*

> 1 yr

(IUCLID)

### *Additional ecological information*

Hazard for drinking water supplies.

Discharge into the environment must be avoided.

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## SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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## SECTION 14. Transport information

### Land transport (DOT)

UN number

UN 1131

Proper shipping name

CARBON DISULPHIDE

Class

3 ( 6.1)

Packing group

I

Environmentally hazardous

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### Air transport (IATA)

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**UN number** UN 1131  
**Proper shipping name** CARBON DISULPHIDE  
**Class** 3 ( 6.1)  
**Packing group**  
**Environmentally hazardous** --  
**Special precautions for user** yes  
**Not permitted for transport**

**Sea transport (IMDG)**

**UN number** UN 1131  
**Proper shipping name** CARBON DISULPHIDE  
**Class** 3 ( 6.1)  
**Packing group** I  
**Environmentally hazardous** --  
**Special precautions for user** yes  
EmS F-E S-D

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**SECTION 15. Regulatory information**

**United States of America**

**OSHA Hazards**

Flammable Liquid  
Skin irritant  
Eye irritant  
Teratogen  
Reproductive hazard  
Target organ effects

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

**SARA 311/312 Hazards**

Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313**

The following components are subject to reporting levels established by SARA Title III, Section 313:

*Ingredients*

carbon disulphide 75-15-0 100 %

**SARA 302**

The following components are subject to reporting levels established by SARA Title III, Section 302:

*Ingredients*

carbon disulphide 75-15-0

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## Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

### *Ingredients*

carbon disulphide

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

### *Ingredients*

carbon disulphide

## DEA List I

Not listed

## DEA List II

Not listed

## US State Regulations

### Massachusetts Right To Know

#### *Ingredients*

carbon disulphide

### Pennsylvania Right To Know

#### *Ingredients*

carbon disulphide

### New Jersey Right To Know

#### *Ingredients*

carbon disulphide

### California Prop 65 Components

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

#### *Ingredients*

carbon disulphide

## Notification status

TSCA:

All components of the product are listed in the TSCA-inventory.

DSL:

All components of this product are on the Canadian DSL.

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## SECTION 16. Other information

### Training advice

Provide adequate information, instruction and training for operators.

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## Full text of H-Statements referred to under sections 2 and 3.

H225	Highly flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.

## Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 05/27/2014

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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