Safety Data Sheet

Part Number 321758

Section 1. Substance Identity and Company Contact Information

Product Name	Dimethyl Disulfide	**Product Part Number(s)**	290452 and 321763
Trade Name	Dimethyl Disulfide	**Unit Size**	< 2 mL
Company	OI Analytical, P.O. Box 9010, College Station, TX 77842-9010 Phone: (979) 690-1711, Fax: (979) 690-0440		

Emergency No. 1-800-424-9300 (Chemtrec). Use only in the event of chemical emergencies involving spills, leaks, fire, exposure, or accidents involving chemicals.

Section 2. Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids (Category 2)
Acute toxicity, Oral (Category 4)
Acute toxicity, Inhalation (Category 3)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3), Respiratory System
Acute aquatic toxicity (Category 2)
Chronic aquatic toxicity (Category 2)

Pictogram(s)

Signal Word

Danger

Hazard Statement(s)

Highly flammable liquid and vapor. Harmful if swallowed. Causes serious eye irritation. Toxic if inhaled. May cause respiratory irritation. Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)

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. Avoid breathing dust/ fumes/ gas/ mist/ vapors/ spray. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Emergency Overview

Flammable, toxic, harmful, and dangerous for the environment.

Target Organ(s)

Blood, liver

Potential Health Effects

Eye:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/ physician. If eye irritation persists: Get medical advice/ attention.
Skin:	Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
Ingestion:	Harmful if swallowed.
Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Chronic Effects/Carcinogenicity	IARC:	No data available
	NTP:	No data available
	OSHA:	No data available
Teratology (Birth Defects) Information	No data available	
Reproductive Information	No data available	
NFPA Ratings	Health:	3
	Flammability:	3
	Reactivity:	0
	Special Notice Key:	No data available
HMIS Rating	Health:	2 (additional chronic hazards present)
	Flammability:	3
	Reactivity:	0
	Protective Equipment:	Wear appropriate PPE

Section 3. Chemical Composition and Data on Components

Ingredient	CAS No.	Percent	Hazard Data	
			ACGIH TLV	OSHA PEL
Dimethyl Disulfide	624-92-0	99	0.5 ppm 1.9 mg/m^3 TWA skin	No data available

Section 4. First Aid Measures

General Advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If Inhaled	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
In Case of Skin Contact	Flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
In Case of Eye Contact	Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.
If Swallowed	Do NOT induce vomiting. Wash out mouth with water provided person is conscious. Call a physician.
Indication of Any Immediate Medical Attention and Special Treatment Needed	No data available

Section 5. Fire-fighting Measures

General Information	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Emits toxic fumes under fire conditions. Flammable liquid.
Suitable Extinguishing Media	Water spray, carbon dioxide, dry chemical powder, or appropriate foam. For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.
Special Hazards Arising from the Substance or mixture	Carbon oxides, sulphur oxides
Advice for Firefighters	No data available
Flash Point	59 °F or 15 °C; Method: closed cup
Autoignition Temperature	> 300 °C

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures	Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Avoid breathing vapors, mist or gas. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and Materials for Containment and Cleaning	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).
Reference to Other Sections	For disposal, see Section 13.

Section 7. Handling and Storage

Precautions for Safe Handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.
Conditions for Safe Storage, Including any Incompatibilities	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Specific End Use(s)	No data available

Section 8. Exposure Controls and Personal Protection

Components with Workplace Control Parameters	Use only in a chemical fume hood.
Appropriate Engineering Controls	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Eye/Face Protection	Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested:Vitoject® (KCL 890 / Aldrich Z677698, Size M) Splash contact Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 30 min Material tested:Butoject® (KCL 897 / Aldrich Z677647, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection	Complete suit protecting against chemicals, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Control of Environmental Exposure	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9. Physical and Chemical Properties

Appearance	Form: Clear liquid; Color: Light yellow
Odor	Stench
Odor Threshold	No data available
pH	No data available
Melting Point/Freezing Point	-85.0 °C
Initial Boiling Point and Boiling Range	109 °C
Flash Point	15 °C
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	No data available
Vapor Pressure	153 hPa (115 mmHg) at 55 °C (131 °F) 38.1 hPa (28.6 mmHg) at 25 °C (77 °F) 22 hPa (17 mmHg) at 20 °C (68 °F) - OECD Test Guideline 104
Vapor Density	3.25 g/L
Relative Density	1.046 g/cm^3 at 25 °C
Water Solubility	No data available
Partition Coefficient : n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No data available
Oxidizing Properties	No data available
Other Safety Information	No data available

Section 10. Stability and Reactivity

Reactivity	No data available
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	Vapours may form explosive mixture with air.
Conditions to Avoid	Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible Materials	Strong bases, strong oxidizing agents, strong reducing agents

Section 11. Toxicological Information

Routes of Exposure	*On the skin:*	May cause irritation.
	On the eye:	Causes irritation
	Inhalation:	May cause respiratory irritation.
	Ingestion:	Harmful if swallowed.
Respiratory or Skin Sensitization	Will not occur	
Signs and Symptoms of Overexposure	Anemia. Exposure can cause nausea, headache, and vomiting.	
Toxicity Data	*Oral Rat*	290 mg/kg $<LD_{50}<$500 mg/kg

Section 12. Ecological Information

General Notes

Toxicity to fish LC50 - Salmo salar (Atlantic salmon) - 1.75 mg/l
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 7 mg/l - 48 h
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

Section 13. Disposal Considerations

Product	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated Packaging	Dispose of as unused product.

Section 14. Transport Information

DOT Shipping Name	Dimethyl disulfide
UN Proper Shipping Name	Dimethyl Disulfide
DOT Hazard Class	3
Packing Group	II
UN Number	2381
Hazardous Ingredients	No data available
DOT Label	No data available
DOT Placard	No data available
IMDG Shipping Name	DIMETHYL DISULPHIDE
UN Number	2381
Class	3
Packing Group	II
IATA Shipping Name	Dimethyl disulphide
Technical Shipping Name	Dimethyl disulphide
IATA Hazard Class	3
UN Number	2381
Hazardous Ingredients	No information available
IATA Passenger	Not permitted for transport
IATA Cargo	Not permitted for transport

Section 15. Regulatory Information

OSHA Status	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.		
TSCA Status	Yes		
CERCLA Reportable Quantity	No data available		
SARA Title III	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.		
RCRA Status	No data available		
California Proposition 65	This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.		
Chemical Weapons Convention	No data available		
TSCA 12 (b)	No data available		
SARA 311/312	Acute:		Yes
	Chronic:		Yes
	Fire:		Yes
	Pressure:		No
	Reactivity:		No
Massachusetts Right To Know Components	Dimethyl disulphide	CAS-No. 624-92-0	Revision Date 1994-04-01
Pennsylvania Right To Know Components	Dimethyl disulphide	CAS-No. 624-92-0	Revision Date 1994-04-01
New Jersey Right To Know Components	Dimethyl disulphide	CAS-No. 624-92-0	Revision Date 1994-04-01
Australian Hazchem Code	No data available		
Poison Schedule	No data available		
WHMIS	This SDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by the CPR.		

Section 16. Other Information

Date Prepared: April 14, 2004
Revised: May 14, 2015

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