

Section 1: Product and Company Identification

Middlesex Gases & Technologies

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Product Code: Carbonyl Sulfide

Section 2: Hazards Identification



Danger

Hazard Classification:

Acute Gas Inhale Toxicity (Category 3)
Gases Under Pressure

Hazard Statements:

Contains gas under pressure; may explode if heated
Toxic if inhaled

Precautionary Statements

Prevention:

Use only outdoors or in a well-ventilated area.
Avoid breathing dust/fume/gas/mist/ vapors/spray.
[In case of inadequate ventilation] wear respiratory protection.

Response:

If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center or doctor.

Storage:

Store in a well-ventilated place. Keep container tightly closed.
Protect from sunlight.
Store locked up.

Disposal:

Dispose of contents and/or container in accordance with applicable regulations.

Section 3: Composition/Information on Ingredients

CAS #

463-58-1

Chemical Substance	Chemical Family	Trade Names
CARBONYL SULFIDE	inorganic, gas	CARBON OXYSULFIDE; CARBON OXIDE SULFIDE; OXYCARBON SULFIDE; COS; UN 2204

Section 4: First Aid Measures

Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.	Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.	If a large amount is swallowed, get medical attention.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.	For inhalation, consider oxygen.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Let burn unless leak can be stopped immediately. Large fires: Use regular foam or flood with fine water spray.	Oxides of carbon, hydrogen sulfide	<ul style="list-style-type: none">Any self-contained breathing apparatus with a full facepiece. Use chemical protective suit.Use chemical protective suit.

Section 6: Accidental Release Measures

Personal Precautions	Environmental Precautions	Methods for Containment
Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Methods for Cleanup	Other Information
Stop leak, evacuate and ventilate area.	Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

Section 7: Handling and Storage

Handling	Storage
Store and handle in accordance with all current regulations and standards.	Not available

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

CARBONYL SULFIDE: No occupational exposure limits established.

Engineering Controls

Handle only in fully enclosed systems.

Eye Protection	Skin Protection	Respiratory Protection
Wear splash resistant safety goggles with a face shield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.	Wear appropriate chemical resistant clothing.	Any self-contained breathing apparatus with a full facepiece. Use chemical protective suit.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9: Physical and Chemical Properties

Physical State	Appearance	Color	Change in Appearance	Physical Form	Odor	Taste
Gas	Colorless	Colorless	N/A	Gas	Distinct odor	N/A

Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Not available	Not available	N/A	Not available	0.29	0.12

Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
-58 F (-50 C)	-218 F (-139 C)	Not available	2.1 (Air=1)	1.24 @ -87 C	Soluble	Not applicable	Not available	Not applicable	Not available

Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
60.07	C-O-S	Not available	Not available	100%	Not applicable	Alcohol

Section 10: Stability and Reactivity

Stability	Conditions to Avoid	Incompatible Materials
Contact with water or moist air may form flammable and/or toxic gases or vapors.	Contact with water or moist air may form flammable and/or toxic gases or vapors.	Bases, oxidizing materials

Hazardous Decomposition Products	Possibility of Hazardous Reactions
Oxides of carbon, hydrogen sulfide	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

Oral LD50	Dermal LD50	Inhalation
Inhalation, LC50, 1 hr, mouse = 1700 ppmv.	Not available	Irritation, nausea, headache, symptoms of drunkenness, convulsions, coma

Eye Irritation	Skin Irritation	Sensitization
Irritation, blisters, tearing	Irritation, nausea, headache, symptoms of drunkenness	Harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, central nervous system depression

Chronic Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects

Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Not available	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Fish toxicity: Not available Invertebrate toxicity: Not available Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Not available	Not available	Not available

Section 13: Disposal Considerations

Dispose in accordance with all applicable regulations.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

Proper Shipping Name	ID Number	Hazard Class or Division	Packing Group	Labeling Requirements	Passenger Aircraft or Railcar Quantity Limitations	Cargo Aircraft Only Quantity Limitations	Additional Shipping Description
Carbonyl sulfide	UN2204	2.3	Not applicable	2.3; 2.1	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone C

Canadian Transportation of Dangerous Goods

Shipping Name	UN Number	Class	Packing Group / Risk Group
Carbonyl sulphide	UN2204	2.3; 2.1	Not applicable

Section 15: Regulatory Information

U.S. Regulations

CERCLA Sections	SARA 355.30	SARA 355.40
100 LBS RQ	Not regulated.	Not regulated.

SARA 370.21

Acute	Chronic	Fire	Reactive	Sudden Release
Yes	No	Yes	Yes	Yes

SARA 372.65

CARBONYL SULFIDE

OSHA Process Safety

Not regulated.

State Regulations

CA Proposition 65

Not regulated.

Canadian Regulations

WHMIS Classification

ABD1

National Inventory Status

US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Listed on inventory.	Not listed.	Not determined.

Section 16: Other Information

NFPA Rating

HEALTH=2 FIRE=4 REACTIVITY=1

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard