



Safety Data Sheet

Carbonyl Sulfide (50PPM) Carbon Disulfide (50 PPM) Hydrogen Sulfide (50PPM) Balance Nitrogen SDS

Red Ball Oxygen Co., Inc.
P.O. Box 7316
Shreveport, LA 71137-7316
Phone: 318-425-3211
Fax: 318-425-6302
<http://www.redballoxygen.com>

Section 1: Product and Company Identification

Red Ball Oxygen Co., Inc.
P.O. Box 7316
Shreveport, LA 71137-7316
Phone: 318-425-3211
Fax: 318-425-6302
<http://www.redballoxygen.com>

Product Code: Carbonyl Sulfide (50PPM) Carbon Disulfide (50 PPM) Hydrogen Sulfide (50PPM) Balance Nitrogen SDS
Part Number: 125975

Synonyms:
Recommended Use:
Usage Restrictions:

Section 2: Hazards Identification



Danger

Hazard Classification:

Eye Effects (Category 2.A)
Gases Under Pressure
Reproductive Toxicity (Category 2)
Specific target organ toxicity (Repeated Exposure) (Category 1)

Hazard Statements:

Causes damage to organs through prolonged or repeated exposure
Causes serious eye irritation
Contains gas under pressure; may explode if heated
Suspected of damaging fertility or the unborn child
Toxic to aquatic life

Precautionary Statements

Prevention:

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.

Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/ vapors/spray..
 Wear protective gloves, protective clothing, eye protection and face protection.
 Obtain special instructions before use.

Response:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a poison center or doctor if you feel unwell.
 If exposed or concerned: Get medical advice/attention.

Storage:

Protect from sunlight.
 Store in well-ventilated place.
 Store locked up.

Disposal:

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

Section 3: Composition/Information on Ingredients

	CAS #	Concentration
Carbonyl Sulfide	463-58-1	50 PPM
Carbon Disulfide	75-15-0	50 PPM
Hydrogen Sulfide	7783-06-4	50 PPM
Nitrogen	7727-37-9	Balance

	Chemical Substance	Chemical Family	Trade Names
Carbonyl Sulfide	CARBONYL SULFIDE	inorganic, gas	CARBON OXYSULFIDE; CARBON OXIDE SULFIDE; OXYCARBON SULFIDE; COS; UN 2204
Carbon Disulfide	CARBON DISULFIDE	organic sulfur compounds	CARBON BISULFIDE; CARBON BISULPHIDE; CARBON DISULPHIDE; CARBON SULFIDE; DITHIOCARBONIC ANHYDRIDE; SULPHOCARBONIC ANHYDRIDE; CARBON SULFIDE (CS2); CARBON SULPHIDE; UN 1131; RCRA P022; CS2
Hydrogen Sulfide	HYDROGEN SULFIDE	inorganic, gas	HYDROGEN SULFIDE (H2S); DIHYDROGEN MONOSULFIDE; DIHYDROGEN SULFIDE; HYDROSULFURIC ACID; SULFUR DIHYDRIDE; SULFURETED HYDROGEN; SULFUR HYDRIDE; STINK DAMP; SEWER GAS; RCRA U135; UN 1053; H2S
Nitrogen	NITROGEN, COMPRESSED GAS	inorganic, gas	DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N2

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Carbonyl Sulfide	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.

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
Carbon Disulfide	Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Administer CPR if necessary. 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 swallowed, drink plenty of water, do NOT induce vomiting. Get immediate medical attention. Induce vomiting only at the instructions of a physician. Do not give anything by mouth to unconscious or convulsive person. Administer CPR if necessary.	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.	For ingestion, consider gastric lavage.
Hydrogen Sulfide	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.
Nitrogen	Wash exposed skin with soap and water.	Flush eyes with plenty of water.	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
Carbonyl Sulfide	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.
Carbon Disulfide	Alcohol resistant foam, carbon dioxide, regular dry chemical, water Large fires: Use alcohol-resistant foam or flood with fine water spray. Fluoroprotein and protein foams are recommended over other types of foam.	Thermal decomposition products or combustion: oxides of carbon, oxides of sulfur	<ul style="list-style-type: none"> ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. ▪ Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. ▪ Protective material types: nitrile butadiene rubber (NBR), polyvinyl alcohol (PVA)
Hydrogen Sulfide	Let burn unless leak can be stopped immediately. Large fires: Use regular foam or flood with fine water spray.	Sulfur oxides	<ul style="list-style-type: none"> ▪ Any self-contained breathing apparatus with a full facepiece. ▪ Protective material types: butyl rubber, polyvinyl chloride (PVC), neoprene
Nitrogen	Non-flammable. Use suitable extinguishing media for surrounding fire. Cylinders may rupture or explode if exposed to heat.	Non-flammable	<ul style="list-style-type: none"> ▪ Respiratory protection may be needed for frequent or heavy exposure.

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
Carbonyl Sulfide	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.

	Personal Precautions	Environmental Precautions	Methods for Containment
Carbon Disulfide	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Do not touch spilled material.	Avoid heat, flames, sparks and other sources of ignition. Keep out of water supplies and sewers.	Stop leak if possible without personal risk. Reduce vapors with water spray. Reduce vapors with water spray. Dig holding area such as lagoon, pond or pit for containment. Dike for later disposal.
Hydrogen Sulfide	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas. Ventilate closed spaces before entering. Evacuation radius: 150 feet. For tank, rail car or tank truck: 800 meters (1/2 mile). Do not touch spilled material.	Avoid heat, flames, sparks and other sources of ignition.	Stop leak if possible without personal risk. Remove sources of ignition. Reduce vapors with water spray. Do not get water directly on material.
Nitrogen	Keep unnecessary people away, isolate hazard area and deny entry. Stay upwind and keep out of low areas.	No significant effects from contamination expected.	Stop leak if possible without personal risk.

	Methods for Cleanup	Other Information
Carbonyl Sulfide	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).
Carbon Disulfide	Small spills: Absorb with sand or other noncombustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Absorb with sand or other non-combustible material. Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash). Absorb with activated carbon. Collect spilled material using mechanical equipment.	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). Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65).
Hydrogen Sulfide	Collect runoff for disposal as potential hazardous waste. Dike for later disposal. Absorb with sand or other non-combustible material. Add an alkaline material (lime, crushed limestone, sodium bicarbonate, or soda ash).	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).
Nitrogen	N/A	N/A

Section 7: Handling and Storage

	Handling	Storage
Carbonyl Sulfide	Store and handle in accordance with all current regulations and standards.	Not available
Carbon Disulfide	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Protect from physical damage. Store outside or in a detached building. Avoid contact with light. Store at room temperature. Use diking sufficient to contain total contents plus 10%. Store under an inert atmosphere.	Avoid heat, flames, sparks and other sources of ignition. Grounding and bonding required. Keep separated from incompatible substances. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30).
Hydrogen Sulfide	Store and handle in accordance with all current regulations and standards. Protect from physical damage. Store outside or in a detached building. Store in a cool, dry place. Store in a well-ventilated area. Avoid contact with light. Grounding and bonding required. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101. Notify State Emergency Response Commission for storage or use at amounts greater than or equal to the TPQ (U.S. EPA SARA Section 302). SARA Section 303 requires facilities storing a material with a TPQ to participate in local emergency response planning (U.S. EPA 40 CFR 355.30). Keep separated from incompatible substances.	Subject to handling regulations: U.S. OSHA 29 CFR 1910.119.
Nitrogen	Store and handle in accordance with all current regulations and standards. Subject to storage regulations: U.S. OSHA 29 CFR 1910.101.	Keep separated from incompatible substances.

Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Carbonyl Sulfide	CARBONYL SULFIDE: No occupational exposure limits established.
Carbon Disulfide	CARBON DISULFIDE: 20 ppm OSHA TWA 30 ppm OSHA ceiling 100 ppm OSHA peak 30 minute(s) 4 ppm (12 mg/m ³) OSHA TWA (skin)(vacated by 58 FR 35338, June 30,1993) 12 ppm (36 mg/m ³) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 1 ppm ACGIH TWA (skin) 1 ppm (3 mg/m ³) NIOSH recommended TWA 10 hour(s) (skin) 10 ppm (30 mg/m ³) NIOSH recommended STEL (skin)
Hydrogen Sulfide	HYDROGEN SULFIDE: 20 ppm OSHA ceiling 50 ppm OSHA peak 10 minute(s) (once if no other measurable exposure occurs) 10 ppm (14 mg/m ³) OSHA TWA (vacated by 58 FR 35338, June 30, 1993) 15 ppm (21 mg/m ³) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 10 ppm ACGIH TWA 15 ppm ACGIH STEL 10 ppm (15 mg/m ³) NIOSH recommended ceiling 10 minute(s) TLV-TWA: 1ppm Upper respiratory irritation (ACGIH)
Nitrogen	NITROGEN, COMPRESSED GAS: NITROGEN: ACGIH (simple asphyxiant)

Engineering Controls

Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Carbonyl Sulfide	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.
Carbon Disulfide	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 supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Hydrogen Sulfide	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.
Nitrogen	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.

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
Carbonyl Sulfide	Gas	Colorless	Colorless	N/A	Gas	Distinct odor	N/A
Carbon Disulfide	Liquid	Clear	Colorless to yellow	N/A	Liquid	Not available	N/A
Hydrogen Sulfide	Gas	Colorless	Colorless	N/A	Gas	Rotten egg odor	N/A
Nitrogen	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Carbonyl Sulfide	Not available	Not available	N/A	Not available	0.29	0.12
Carbon Disulfide	-22 F (-30 C) (CC)	IB	16982.44 (log = 4.24) (estimated from water solubility)	194 F (90 C)	0.5	0.01
Hydrogen Sulfide	Flammable	Not available	Not available	500 F (260 C)	44-46%	4.0-4.3%
Nitrogen	Not flammable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
Carbonyl Sulfide	-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
Carbon Disulfide	115 F (46 C)	-168 F (-111 C)	300 mmHg @ 20 C	2.6 (Air=1)	1.261 @ 22 C	0.22% @ 22 C	Not available	Reported values vary widely and are not reliable; 0.022 ppm (detection); 0.21 ppm (recognition); 0.016 to 0.42 ppm (methods not specified).	22.6 (butyl acetate=1)	0.367 cP @ 20 C
Hydrogen Sulfide	-78 to -77 F (-61 to -60.3 C)	-123 F (-86 C)	15200 mmHg @ 25 C	1.2 (Air=1)	1.192	2.58-2.9% @ 20 C	4.5-<7 (saturated solution)	0.13 ppm	Not applicable	0.0128 cP @ 25 C
Nitrogen	-321 F (-196 C)	-346 F (-210 C)	760 mmHg @ -196 C	0.967 (Air=1)	Not applicable	1.6% @ 20 C	Not applicable	Not available	Not applicable	0.01787 cP @ 27 C

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Carbonyl Sulfide	60.07	C-O-S	Not available	Not available	100%	Not applicable	Alcohol
Carbon Disulfide	76.13	C-S ₂	Not available	Not available	0%	1	Soluble: Ethanol, methanol, ether, benzene, chloroform, carbon tetrachloride, oils
Hydrogen Sulfide	34.08	H ₂ -S	1.539 g/L @ 0 C	Not available	Not available	Not applicable	Soluble: Carbon disulfide, alcohol, ether, glycerol, gasolines, kerosene, crude oil, alkali solutions
Nitrogen	28.0134	N ₂	1.2506 g/L	Not available	100%	1	Soluble: Liquid ammonia

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Carbonyl Sulfide	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
Carbon Disulfide	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Metals, combustible materials, oxidizing materials, amines, halogens, metal oxides
Hydrogen Sulfide	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Combustible materials, metals, oxidizing materials, halogens, metal oxides, metal salts, bases, rust, oxidants, oxygen, copper powder, acetaldehyde, silver fulminate
Nitrogen	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Metals, oxidizing materials

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Carbonyl Sulfide	Oxides of carbon, hydrogen sulfide	Will not polymerize.
Carbon Disulfide	Oxides of carbon, oxides of sulfur	Will not polymerize.
Hydrogen Sulfide	Oxides of sulfur	Will not polymerize.
Nitrogen	Oxides of nitrogen	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation

	Oral LD50	Dermal LD50	Inhalation
Carbonyl Sulfide	Inhalation, LC50, 1 hr, mouse = 1700 ppmv.	Not available	Irritation, nausea, headache, symptoms of drunkenness, convulsions, coma
Carbon Disulfide	1200 mg/kg oral-rat LD50	Not established	Irritation, chest pain, headache, symptoms of drunkenness, disorientation, tingling sensation, dilated pupils, coma
Hydrogen Sulfide	444 ppm inhalation-rat LC50	Irritation 0.000125 ppm/5 hour(s) eyes-human	Irritation, lack of sense of smell, sensitivity to light, nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, disorientation, tremors, visual disturbances, suffocation, lung congestion, internal bleeding, heart damage, nerve damage, brain damage, coma, death
Nitrogen	Not available	Not available	Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, convulsions, coma

	Eye Irritation	Skin Irritation	Sensitization
Carbonyl Sulfide	Irritation, blisters, tearing	Irritation, nausea, headache, symptoms of drunkenness	Harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, central nervous system depression
Carbon Disulfide	Irritation (possibly severe), blurred vision	Irritation (possibly severe), chest pain, headache, symptoms of drunkenness, disorientation, tingling sensation, dilated pupils, coma, absorption may occur, symptoms of drunkenness	Respiratory tract irritation, skin irritation, eye irritation, central nervous system depression, nerve damage
Hydrogen Sulfide	Irritation, sensitivity to light, visual disturbances	Irritation liquid: frostbite	Harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation, blood damage
Nitrogen	Contact with rapidly expanding gas may cause burns or frostbite	No information on significant adverse effects	Difficulty breathing

Chronic Effects

	Carcinogenicity	Mutagenicity	Reproductive Effects	Developmental Effects
Carbonyl Sulfide	Not available	Not available	Not available	No data
Carbon Disulfide	Not available	Available.	Available.	No data
Hydrogen Sulfide	Not available	Not available	Available.	No data
Nitrogen	Not hazardous	Not available	Not available	No data

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Carbonyl Sulfide	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
Carbon Disulfide	Fish toxicity: Acute LC50 2.99 mg/L Fresh water Fish - Guppy - <i>Poecilia reticulata</i> - Young - 2 cm 96 hours; 65000 ug/L 96 hour(s) LC50 (Mortality) Bleak (<i>Alburnus al</i>) Invertebrate toxicity: 2100 ug/L 48 week(s) LC50 (Mortality) Water flea (<i>Daphnia magna</i>) Algal toxicity: 21000 ug/L 96 week(s) EC50 (Growth) Green algae (<i>Chlorella pyrenoidosa</i>) Phyto toxicity: Not available Other toxicity: Not available	Moderately toxic to aquatic life. Relatively non-persistent in the environment. Highly volatile from water.	Accumulates very little in the bodies of living organisms.	Or the sediment at a slow rate.
Hydrogen Sulfide	Fish toxicity: Acute LC50 7 ug/L Fresh water Fish - Fathead minnow - <i>Pimephales promelas</i> - FRY 96 hours; 14.9 ug/L 96 hour(s) LC50 (Mortality) Fathead minnow (<i>Pimeph</i>) Invertebrate toxicity: 9730 ug/L 1.5 hour(s) (Mortality) Mediterranean mussel (<i>Mytilus galloprovincialis</i>) Algal toxicity: Not available Phyto toxicity: Not available Other toxicity: Not available	Highly toxic to aquatic life.	Not available	Not available

Nitrogen	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

Carbonyl Sulfide	Dispose in accordance with all applicable regulations.
Carbon Disulfide	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): P022.
Hydrogen Sulfide	Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): U135.
Nitrogen	Dispose in accordance with all applicable regulations.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101

DOT Information For This Mixture

Shipping Name	Compressed gas, n.o.s. (Nitrogen, Carbonyl Sulfide)
UN Number	UN1956
Hazard Class	2.2
Hazard Information	Non-Flammable Gas

Individual Component Information

	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	Carbonyl sulfide	UN2204	2.3	Not applicable	2.3; 2.1	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone C
Carbon Disulfide	Carbon disulfide	UN1131	3	I	3; 6.1	Forbidden	Forbidden	N/A
Hydrogen Sulfide	Hydrogen sulfide	UN1053	2.3	Not applicable	2.3; 2.1	Forbidden	Forbidden	Toxic-Inhalation Hazard Zone B
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Carbonyl Sulfide	Carbonyl sulphide	UN2204	2.3; 2.1	Not applicable
Carbon Disulfide	Carbon disulfide	UN1131	3; 6.1	I
Hydrogen Sulfide	HYDROGEN SULFIDE; or HYDROGEN SULPHIDE	UN1053	2.3; 2.1	Not applicable
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Carbonyl Sulfide	100 LBS RQ	Not regulated.	Not regulated.
Carbon Disulfide	100 LBS RQ	10000 LBS TPQ	100 LBS RQ
Hydrogen Sulfide	100 LBS RQ	500 LBS TPQ	100 LBS RQ

Nitrogen	Not regulated.	Not regulated.	Not regulated.
----------	----------------	----------------	----------------

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Carbonyl Sulfide	Yes	No	Yes	Yes	Yes
Carbon Disulfide	Yes	Yes	Yes	No	No
Hydrogen Sulfide	Yes	No	Yes	No	Yes
Nitrogen	Yes	No	No	No	Yes

SARA 372.65

Carbonyl Sulfide	CARBONYL SULFIDE
Carbon Disulfide	CARBON DISULFIDE
Hydrogen Sulfide	HYDROGEN SULFIDE: Administrative stay issued Aug. 22, 1994
Nitrogen	Not regulated.

OSHA Process Safety

Carbonyl Sulfide	Not regulated.
Carbon Disulfide	Not regulated.
Hydrogen Sulfide	1500 LBS TQ
Nitrogen	Not regulated.

State Regulations

	CA Proposition 65
Carbonyl Sulfide	Not regulated.
Carbon Disulfide	Known to the state of California to cause the following: Carbon disulfide Developmental toxicity (Jul 01, 1989) Male reproductive toxicity (Jul 01, 1989) Female reproductive toxicity (Jul 01, 1989)
Hydrogen Sulfide	Not regulated.
Nitrogen	Not regulated.

Canadian Regulations

	WHMIS Classification
Carbonyl Sulfide	ABD1
Carbon Disulfide	B2, D1B, D2A, D2B
Hydrogen Sulfide	A, B1, D1A, D2B.
Nitrogen	A

National Inventory Status

	US Inventory (TSCA)	TSCA 12b Export Notification	Canada Inventory (DSL/NDSL)
Carbonyl Sulfide	Listed on inventory.	Not listed.	Not determined.
Carbon Disulfide	Listed on inventory.	CARBON DISULFIDE CAS NUMBER: 75-15-0 SECTION 4	Not determined.
Hydrogen Sulfide	Listed on inventory.	Not listed.	Listed on inventory.
Nitrogen	Listed on inventory.	Not listed.	Listed on inventory.

Section 16: Other Information

	NFPA Rating
Carbonyl Sulfide	HEALTH=2 FIRE=4 REACTIVITY=1
Carbon Disulfide	HEALTH=3 FIRE=3 REACTIVITY=0
Hydrogen Sulfide	HEALTH=4 FIRE=4 REACTIVITY=0
Nitrogen	HEALTH=1 FIRE=0 REACTIVITY=0

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