

Safety Data Sheet



Division of Fresno Oxygen

Barnes Welding Supply/Barnes Specialty Gases

Division of Fresno Oxygen

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Section 1: Product and Company Identification

Barnes Welding Supply / Barnes Specialty Gases - Division of Fresno Oxygen

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FOR CHEMICAL EMERGENCIES DURING TRANSPORTATION ONLY CALL INFOTRAC 1-800-535-5053

Product Name: Gas Standard w/1 ppm Sulfur Comp. in N₂

Part Number: CS Mix

Synonyms: Non-Flammable Gas Mixture CS Mixes
Recommended Use: For analytical/synthetic chemical gas use
Usage Restrictions:

Section 2: Hazards Identification



Danger

Hazard Classification:
Eye Effects (Category 2A)
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

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
Carbon Disulfide	75-15-0	0.0 – 1%
Nitrogen	7727-37-9	Balance

	Chemical Substance	Chemical Family	Trade Names
Nitrogen	NITROGEN, COMPRESSED GAS	Inorganic gases	DIATOMIC NITROGEN; DINITROGEN; NITROGEN; NITROGEN-14; NITROGEN GAS; UN 1066; N ₂
Carbon Disulfide	CARBON DISULFIDE	Sulfides	CARBON BISULFIDE; CARBON BISULPHIDE; CARBON DISULPHIDE; CARBON SULFIDE; DITHIOCARBONIC ANHYDRIDE; SULPHOCARBONIC ANHYDRIDE; CARBON SULFIDE (CS ₂); CARBON SULPHIDE; UN 1131; RCRA P022; CS ₂

Section 4: First Aid Measures

	Skin Contact	Eye Contact	Ingestion	Inhalation	Note to Physicians
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.
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.

Section 5: Fire Fighting Measures

	Suitable Extinguishing Media	Products of Combustion	Protection of Firefighters
Nitrogen	Non-flammable. Use suitable extinguishing media for surrounding fire. Cylinders may rupture or explode if exposed to heat.	Non-flammable	Respiratory protection may be needed for frequent or heavy exposure.
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	- 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)

Section 6: Accidental Release Measures

	Personal Precautions	Environmental Precautions	Methods for Containment
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.
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.

	Methods for Cleanup	Other Information
Nitrogen	N/A	N/A
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).

Section 7: Handling and Storage

	Handling	Storage
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.
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).

Section 8: Exposure Controls/Personal Protection

	Exposure Guidelines
Nitrogen	NITROGEN, COMPRESSED GAS: NITROGEN: ACGIH (simple asphyxiant)

	Exposure Guidelines
Carbon Disulfide	CARBON DISULFIDE: 20 ppm OSHA TWA 30 ppm OSHA ceiling 100 ppm OSHA peak 30 minute(s) 4 ppm (12 mg/m3) OSHA TWA (skin)(vacated by 58 FR 35338, June 30, 1993) 12 ppm (36 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993) 1 ppm ACGIH TWA (skin) 1 ppm (3 mg/m3) NIOSH recommended TWA 10 hour(s) (skin) 10 ppm (30 mg/m3) NIOSH recommended STEL (skin)

Engineering Controls
Handle only in fully enclosed systems.

	Eye Protection	Skin Protection	Respiratory Protection
Nitrogen	Eye protection not required, but recommended.	Protective clothing is not required.	Respiratory protection may be needed for frequent or heavy exposure.
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.

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
Nitrogen	Gas	Clear	Colorless	N/A	Gas	Odorless	Tasteless
Carbon Disulfide	Liquid	Clear	Colorless to yellow	N/A	Liquid	Rotten radish	N/A

	Flash Point	Flammability	Partition Coefficient	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits
Nitrogen	Not flammable	Not available	Not available	Nonflammable	Nonflammable	Nonflammable
Carbon Disulfide	-22 F (-30 C) (CC)	IB	16962.44 (log = 4.24) (estimated from water solubility)	194 F (90 C)	0.5	0.01

	Boiling Point	Freezing Point	Vapor Pressure	Vapor Density	Specific Gravity	Water Solubility	pH	Odor Threshold	Evaporation Rate	Viscosity
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
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

	Molecular Weight	Molecular Formula	Density	Weight per Gallon	Volatility by Volume	Volatility	Solvent Solubility
Nitrogen	28.0134	N2	1.2506 g/L	Not available	100%	1	Soluble: Liquid ammonia
Carbon Disulfide	76.13	C-S2	Not available	Not available	0%	1	Soluble: Ethanol, methanol, ether, benzene, chloroform, carbon tetrachloride, oils

Section 10: Stability and Reactivity

	Stability	Conditions to Avoid	Incompatible Materials
Nitrogen	Stable at normal temperatures and pressure.	Stable at normal temperatures and pressure.	Metals, 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

	Hazardous Decomposition Products	Possibility of Hazardous Reactions
Nitrogen	Oxides of nitrogen	Will not polymerize.
Carbon Disulfide	Oxides of carbon, oxides of sulfur	Will not polymerize.

Section 11: Toxicology Information

Acute Effects

	Oral LD50	Dermal LD50	Inhalation
Nitrogen	Not available	Not available	Nausea, vomiting, difficulty breathing, headache, drowsiness, dizziness, tingling sensation, loss of coordination, 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

	Eye Irritation	Skin Irritation	Sensitization
Nitrogen	Contact with rapidly expanding gas may cause burns or frostbite	No information on significant adverse effects	Difficulty breathing
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	Acute toxicity, Category 4, oral; H302: Harmful if swallowed. Skin irritation, Category 2; H315: Causes skin irritation. Eye irritation, Category 2; H319: Causes serious eye irritation. Reproductive toxicity, Category 2; H361: Suspected of damaging fertility or the unborn child. Specific Target Organ Toxicity (repeated exposure), Category 1; H372: Causes damage to organs through prolonged or repeated exposure.

Chronic Effects

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

Section 12: Ecological Information

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
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
Carbon Disulfide	Fish toxicity: Acute LC50 2.99 mg/L Fresh water Fish - Guppy - Poecilia reticulata - Young - 2 cm 96 hours; 65000 ug/L 96 hour(s) LC50 (Mortality) Bleak (Alburnus al Invertebrate toxicity: 2100 ug/L 48 week(s) LC50 (Mortality) Water flea (Daphnia magna) Algal toxicity: 21000 ug/L 96 week(s) EC50 (Growth) Green algae (Chlorella pyrenoidosa) 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.

Section 13: Disposal Considerations

Nitrogen	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.

Section 14: Transportation Information

U.S. DOT 49 CFR 172.101
DOT Information For This Mixture

Shipping Name	Compressed gas, n.o.s. (Nitrogen, Carbon Disulfide)
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
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable	2.2	75 kg or L	150 kg	N/A
Carbon Disulfide	Carbon disulfide	UN1131	3	1	3; 6.1	Forbidden	Forbidden	N/A

Canadian Transportation of Dangerous Goods

	Shipping Name	UN Number	Class	Packing Group / Risk Group
Nitrogen	Nitrogen, compressed	UN1066	2.2	Not applicable
Carbon Disulfide	Carbon disulfide	UN1131	3; 6.1	1

Section 15: Regulatory Information

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Nitrogen	Not regulated.	Not regulated.	Not regulated.
Carbon Disulfide	100 LBS RQ	10000 LBS TPQ	100 LBS RQ

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Nitrogen	Yes	No	No	No	Yes
Carbon Disulfide	Yes	Yes	Yes	No	No

SARA 372.65

Nitrogen	Not regulated.
Carbon Disulfide	CARBON DISULFIDE

OSHA Process Safety

Nitrogen	Not regulated.
Carbon Disulfide	Not regulated.

State Regulations

	CA Proposition 65
Nitrogen	Not regulated.
Carbon Disulfide	WARNING: This product can expose you to chemicals including Carbon Disulfide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov .

Canadian Regulations

	WHMIS Classification
Nitrogen	A
Carbon Disulfide	B2, D1B, D2A, D2B

National Inventory Status

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

Section 16: Other Information

	NFPA Rating
Nitrogen	HEALTH=1 FIRE=0 REACTIVITY=0
Carbon Disulfide	HEALTH=3 FIRE=3 REACTIVITY=0

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