



Scott Specialty Gases

M-21453/

SCOTT_SPECIALTY_GASES

MATERIAL SAFETY DATA SHEETS

DATE: 12/18/00

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

TROY, MI 48083
 EMERGENCY PHONE: (248) 589-2950
 NUMBER

1. CHEMICAL PRODUCT

PRODUCT NAME: CARBON MONOXIDE IN
 NITROGEN

SYNONYMS: None

2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)		
				ACGIH TLV	OSHA PEL	MAC
CARBON MONOXIDE	CO	630-08-0	15-75.2 PCT	25	50	25
NITROGEN	N2	7727-37-9	BALANCE	S/A	S/A	S/A

Note: NE = NONE ESTABLISHED
 S/A = SIMPLE ASPHYXIANT

3. HAZARD IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Flammable, high pressure gas.
 Acts on blood causing damage to central nervous system.
 Can be fatal even with adequate oxygen.
 Can form explosive mixtures with air.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation

ACUTE EFFECTS: Carbon monoxide is highly toxic by the reduction of blood's oxygen carrying capacity resulting in oxygen starvation of body cells. Symptoms include rapid respiration, muscular incoordination, fatigue, dizziness, nausea, vomiting, unconsciousness, and death.

CHRONIC EFFECTS: Cardiovascular problems.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No
 IARC MONOGRAPHS - No
 OSHA REGULATED - No

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4. FIRST AID MEASURES

INHALATION: Immediately remove victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.

EYE CONTACT: None

SKIN CONTACT: None

INGESTION: None

IN EVENT OF EXPOSURE, CONSULT A PHYSICIAN

NOTE TO PHYSICIAN: None

5. FIRE FIGHTING MEASURES

FLASH POINT: Gas

AUTOIGNITION TEMPERATURE: 700 deg.C

FLAMMABLE LIMITS: % in N2

LOWER: 15

UPPER: 74

EXTINGUISHING MEDIA: Use what is appropriate for surrounding fire.

SPECIAL FIRE FIGHTING INSTRUCTION AND EQUIPMENT: Wear self-contained breathing apparatus and full protective clothing. Keep fire exposed cylinders cool with water spray. If possible, stop the product flow.

HAZARDOUS COMBUSTION PRODUCTS: Toxic carbon monoxide may be given off during combustion.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Cylinder rupture may occur under fire conditions. Severe when exposed to heat or flame. May form explosive mixture in

source of heat.

SPECIALIZED EQUIPMENT: None

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Secure cylinder when using to protect from falling. Use suitable hand to move cylinders.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in well ventilated areas. Keep valve protection cap on cylinders not in use. Store away from heat, and sparks.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentrations below exposure and flammable limits.

PERSONAL PROTECTION

EYE/FACE PROTECTION: Safety glasses

SKIN PROTECTION: None

RESPIRATORY PROTECTION: In case of leakage, use self-contained breathing apparatus.

OTHER PROTECTIVE EQUIPMENT: Safety when handling cylinders.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colorless

ODOR: Odorless

PHYSICAL STATE: Gas

VAPOR PRESSURE: N/Ap

VAPOR DENSITY (AIR=1): 0.97

BOILING POINT (C): N/Ap

air. A potential explosion hazard exists if a CO fire is extinguished without turning off the CO source due to the possibility of reignition.

SOLUBILITY IN WATER: cm3/100cm3 H2O
1.485
SPECIFIC GRAVITY (H2O=1): Gas
EVAPORATION RATE: Gas
ODOR THRESHOLD: None

6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Remove leaking cylinder to exhaust hood or safe outdoor area. Shut off source if possible and remove

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10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

CONDITIONS TO AVOID: Storage in poorly ventilated areas. Storage near a heat source.

MATERIALS TO AVOID: Toxic carbon monoxide reacts with BrF3, SC2O, ClF3, IF7, NF3, O2, OF2, Ag2O and oxidizing materials. Nitrogen reacts with Li, Nd, and Ti at high temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: None

ADR/RID (EU Only): Class 2,1F

SPECIAL PRECAUTIONS: Cylinders should be transported in a secure upright position in a well ventilated truck.

15. REGULATORY INFORMATION

OSHA: Process Safety Management: This component is not listed in appendix 29 CFR 1910.119 as a highly hazardous chemical.

TSCA: Mixture is not listed in TSCA inventory.

SARA: The threshold planning quantity for this mixture is 10,000 lbs.

EU NUMBER: N/Ap

NUMBER IN ANNEX 1 OF DIR 67/548: This mixture is listed in annex 1.

EU CLASSIFICATION: N/Ap

R: 20

S: 9

11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC50): 3760 ppm, Rat 1 hour. (CO)

LETHAL DOSE 50 (LD50): N/Ap

TERATOGENICITY: N/Ap

REPRODUCTIVE EFFECTS: N/Ap

MUTAGENICITY: N/Ap

12. ECOLOGICAL INFORMATION

No adverse ecological effects are expected.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of non-refillable cylinders in accordance with federal, state and local regulations. Allow gas to vent slowly to atmosphere in an unconfined area or exhaust hood. If the cylinders are the

16. OTHER INFORMATION

OTHER PRECAUTIONS: Protect container from physical damage. Do not deface cylinders or labels. Cylinders should be refilled by qualified producers of compressed gas. Shipment of a compressed gas cylinder which has not been filled by the owner or with his written consent is a violation of federal law (49 CFR 171.15)

ABBREVIATIONS:

refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.

N/Ap - Not Applicable
N/Av - Not Available
SA - Simple Asphyxiant
NE - None Established

14. TRANSPORT INFORMATION

CONCENTRATION: 15-75.2%
DOT DESCRIPTION (US ONLY):
PROPER SHIPPING NAME: Compressed gases,
flammable, n.o.s.
HAZARD CLASS: 2.1 (flammable)
IDENTIFICATION NUMBER: UN1954
REPORTABLE QUANTITIES: None
LABELING: FLAMMABLE GAS

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