



# Scott Specialty Gases

M-21213/

SCOTT\_SPECIALTY\_GASES

MATERIAL SAFETY DATA SHEETS

DATE: 11/20/97

SUPPLIER ADDRESS: 1290 COMBERMERE STREET

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

## 1. CHEMICAL PRODUCT

PRODUCT NAME: CARBON DIOXIDE IN AIR      SYNONYMS: None

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient Name	Formula	CAS#	Concentration	Exposure Limits (PPM)		
				ACGIH TLV	OSHA PEL	MAC
CARBON DIOXIDE	CO2	124-38-9	.5001-20 PCT	5000	5000	5000
AIR	O2/N2	132259-10-OBALANCE		NE	NE	NE

Note: NE = NONE ESTABLISHED

## 3. HAZARD IDENTIFICATION

\*\*\* EMERGENCY OVERVIEW \*\*\*  
 High pressure gas.  
 May accelerate combustion.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation

ACUTE EFFECTS: Exposure to carbon dioxide at 1-4% concentrations result in increased respiratory volume. Concentrations greater than 4% produce labored breathing and is dangerous for even a few minutes. Symptoms include rapid respiration, muscular incoordination, fatigue, dizziness, nausea, vomiting, unconsciousness, and death. At highest concentrations (>14%) of CO2 mixture act as a simple asphyxiant by displacing air necessary for life.

CHRONIC EFFECTS: None known

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None known

OTHER EFFECTS OF OVEREXPOSURE: None

CARCINOGENICITY (US Only):

NTP - No  
 IARC MONOGRAPHS - No  
 OSHA REGULATED - No

Continu

M-21213/

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: Nonflammable

AUTOIGNITION TEMPERATURE: N/Ap

FLAMMABLE LIMITS: Nonflammable  
LOWER:  
UPPER:

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: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: Escaping gas mixtures containing 19-24% oxygen (air) vigorously supports combustion of surrounding materials and may accelerate it. High oxidizing atmosphere increases the likelihood of

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.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation to maintain concentration below exposure 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): @20 deg.C:  
psig  
BOILING POINT (C): N/Ap  
SOLUBILITY IN WATER: v/v @68 deg.F  
SPECIFIC GRAVITY (H2O=1): Gas  
EVAPORATION RATE: Gas

fires. Cylinder rupture may occur under fire conditions.

#### 6. ACCIDENTAL RELEASE MEASURES

CLEAN UP PROCEDURES: Evacuate and ventilate area. Shut off source if possible and remove source of heat.

SPECIALIZED EQUIPMENT: None

MATERIALS TO AVOID: Carbon dioxide, being weakly acidic, reacts with alkaline materials to form carbonates and bicarbonates. Carbon dioxide decomposes when heated above 1700 degrees celsius. Flammable and combustible materials, especially greases and oils.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION: None

#### 11. TOXICOLOGICAL INFORMATION

LETHAL CONCENTRATION (LC50): NONE ESTABLISHED  
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 refillable type, return cylinders to supplier with any valve outlet plugs or caps secured and valve protection caps in place.

#### 14. TRANSPORT INFORMATION

ODOR THRESHOLD: N/Ap

#### 10. STABILITY AND REACTIVITY

STABILITY: Stable under normal storage conditions.

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

Continued  
M-21213/

#### 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 not listed in annex 1.

EU CLASSIFICATION: N/Ap

R: 20

S: 9, 17

#### 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

#### ABBREVIATIONS:

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

DISCLAIMER: Information included is

CONCENTRATION: .5001 - 20%  
DOT DESCRIPTION (US ONLY):  
PROPER SHIPPING NAME: Compressed gases,  
n.o.s.  
HAZARD CLASS: 2.2 (nonflammable)  
IDENTIFICATION NUMBER: UN1956  
REPORTABLE QUANTITIES: None  
LABELING: NONFLAMMABLE GAS

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

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

document is given to the best of c  
knowledge, however, no warranty is  
that the information is accurate c  
complete. We do not accept any  
responsibility for damages by the  
the document.