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## MATERIAL SAFETY DATA SHEET

PRODUCT IDENTIFIER: **CARBON DIOXIDE – OXYGEN - INERT GAS MIXTURE\***

Product Name(s):  
CARBON DIOXIDE – OXYGEN -INERT GAS MIXTURE\*

Formula:  
BLEND OF OXYGEN & CARBON DIOXIDE IN  
ARGON

Synonym(s): RICHMIX 503, 505, 510  
PRODUCT USE(S): INERT SHIELDING FOR WELDING

Chemical Family: NOT APPLICABLE  
W.H.M.I.S. Classification Class(es): A

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### HAZARDOUS INGREDIENTS:

INGREDIENT PARAMETERS	C.A.S. / P.I.N. NUMBER(S)	CONC. % VOL./VOL.	L.D. 50 (Species & Route)	L.C. 50 (Species & Route)
OXYGEN	7782447/1072	1 TO 5%	NOT APPL.	NOT APPL.
CARBON DIOXIDE	124385/1013	1 TO 20%	NOT APPL.	LCLo 90%/5min(inhl-man)
ARGON	7440371/1006	70 TO 98%	NOT APPL.	NOT APPL.

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### PHYSICAL DATA

PHYSICAL STATE:	Gas @ N.T.P.
ODOUR AND APPEARANCE:	Colourless and Odourless.
ODOUR THRESHOLD:	None
SPECIFIC GRAVITY (air=1):	>1(AIR=1) (please refer to the M.S.D.S. of the components)
VAPOUR PRESSURE:	Container rated pressure
VAPOUR DENSITY (air=1):	>1(AIR=1) (please refer to the M.S.D.S. of the components)
EVAPORATION RATE:	Rapid
BOILING POINT:	Not available for this blend (please refer to the M.S.D.S. of the components)
FREEZING POINT:	Not available for this blend (please refer to the M.S.D.S. of the components)
pH:	Not Applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION:	Not Applicable
SOLUBILITY IN WATER:	Not available for this blend (please refer to the M.S.D.S. of the components)
% VOLATILES:	100

FOR TRANSPORT EMERGENCY CALL COLLECT CANUTEC TEL: 1-613-996-6666

**FIRE OR EXPLOSION HAZARDS**

CONDITIONS OF FLAMMABILITY:	None
MEANS OF EXTINCTION:	Cool containers with water spray. Extinguish surrounding fires.
FLASH POINT:	NONE
UPPER FLAMMABLE LIMIT: NONE	LOWER FLAMMABLE LIMIT: NONE
AUTOIGNITION TEMPERATURE:	NONE
HAZARDOUS COMBUSTION PRODUCTS:	NONE
SENSITIVITY TO MECHANICAL IMPACT:	NONE
SENSITIVITY TO STATIC DISCHARGE:	NONE
SPECIAL PROCEDURES:	Evacuate areas where a leak or a spill is present. Fight the surrounding fires at the case may be. Escaping Carbon Dioxide may displace air. Ensure appropriate air supply when approaching or entering the area.

**REACTIVITY DATA**

CONDITIONS OF CHEMICAL UNSTABILITY:	NONE
INCOMPATIBILITY:	NONE
CONDITIONS OF REACTIVITY:	CO <sub>2</sub> may corrode iron and other metals in presence of moisture. (as Carbonic Acid)
HAZARDOUS DECOMPOSITION PRODUCTS:	NONE

**TOXICOLOGICAL PROPERTIES**

ROUTE OF ENTRY	
SKIN (CONTACT):	NO
SKIN (ABSORPTION):	NO
EYE CONTACT:	YES
INHALATION:	YES
INGESTION:	NO

**EFFECTS OF ACUTE EXPOSURE:**

Exposure to the above blend may cause suffocation since the oxygen content may be insufficient to sustain life. Symptoms may include: nausea, dizziness, unconsciousness, convulsions, coma and death. Such effects would be function of the extent of the exposure.

EFFECTS OF CHRONIC EXPOSURE: NONE KNOWN

EXPOSURE LIMITS:	CO <sub>2</sub> T.L.V.- T.W.A. 5,000 ppm. S.T.E.L. 30,000 ppm. (A.C.G.I.H.)
IRRITANCY:	NONE
SENSITIZATION:	NONE
CARCINOGENICITY:	NONE
REPRODUCTIVE TOXICITY:	NONE
TERATOGENICITY:	NONE
MUTAGENICITY:	NONE
TOXIC SYNERGISTIC PRODUCTS:	NONE

## FIRST AID

EYE: Gas may harm the unprotected eye if delivered at pressures higher than atmospheric. Obtain medical attention if damages are suspected or present.  
INGESTION: Not applicable  
INHALATION: Move victim to fresh air if possible. Administer C.P.R. If breathing has stopped. If breathing is difficult give oxygen. Obtain medical attention.  
SKIN: Not applicable.

## PREVENTIVE MEASURES

### PERSONAL PROTECTION

EYE: Safety glasses or goggles to protect from accidental leaks under pressure.  
HAND: Work gloves.  
FEET: Safety footwear where applicable.  
CLOTHING: Long sleeves, trousers recommended.  
RESPIRATOR: Not applicable

### ENGINEERING CONTROLS:

Provide ventilation. Keep oil, grease, combustible materials away. Provide ventilation in work areas. Ventilation should be designed to maintain CO<sub>2</sub> concentrations below the T.L.V..

### SPILL AND LEAK PROCEDURE:

Shutoff the source if without risk . Use SCBA to enter confined spaces. Monitor for oxygen concentration and oxygen concentration prior to re-entry. Gas will dissipate depending on site/area ventilation.

### WASTE DISPOSAL:

Do not discard empty cylinders, Return the cylinder where applicable. Waste cylinders may have to be disposed in accordance to Federal, Provincial and Municipal requirements.

### HANDLING PROCEDURES & EQUIPMENT:

Use in well ventilated areas. Keep container upright when in use. Keep away from flames, electrical sparks.  
Use appropriate carts for moving containers. Secure container when in use. Close the container valve when NOT in use, or when empty. Secure (restrain) during transportation or use. Use backflow preventive devices (checkvalves) piping & tubing (including hoses) to avoid suckbacks. Protect container valves when not in use.

### STORAGE REQUIREMENTS:

Store in well ventilated areas. Keep away from open flames, heat. Store at temperatures below 52°C (125°F).

### SPECIAL SHIPPING INFORMATION:

Transport upright in well-ventilated vehicle. Do not transport in trunk of enclosed vehicle. Commercial (cylinders) quantities may NOT be transported in passenger compartments.

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T.D.G. SHIPPING NAME: COMPRESSED GAS N.O.S. T.D.G. CLASSIFICATION CLASS(ES): 2.2

T.D.G. P.I.N. / U.N. : 1956

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