
1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the preparation

Product Name: "INERGEN"
Chemical Name: N/A – This is a mixture/preparation.
CAS No.: N/A – This is a mixture/preparation.
Chemical Formula: N/A – This is a mixture/preparation.
EINECS Number: N/A – This is a mixture/preparation.

1.2. Use of the preparation

The intended or recommended use of this preparation is to discharge a FIRE EXTINGUISHING AGENT.

1.3. Company identification

Manufacturer/Supplier: ANSUL INCORPORATED
Address: One Stanton Street, Marinette, WI 54143-2542
Prepared by: Safety and Health Department
Phone: 715-735-7411
Internet/Home Page: <http://www.ansul.com>
Date of Issue: December 2004

1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887

2. COMPOSITION/INFORMATION ON INGREDIENTS

- 2.1. Ingredient Name: Nitrogen.
Chemical Formula: N₂.
CAS No.: 7727-37-9.
EINECS Number: 231-783-9.
Concentration, Wt %: 42.5 %
Hazard Identification: See Heading 3.
- Ingredient Name: Argon.
Chemical Formula: A.
CAS No.: 7440-37-1.
EINECS Number: 231-147-0.
Concentration, Wt %: 47 %.
Hazard Identification: See Heading 3.
- Ingredient Name: Carbon Dioxide.
Chemical Formula: CO₂.
CAS No.: 124-38-9.
EINECS Number: 204-696-9.
Concentration, Wt %: 10.5 %.
Hazard Identification: See Heading 3.

3. HAZARDS IDENTIFICATION

FOR HUMANS:

Product:
EU Classification: Nonflammable Gas.
R Phrases: None.
S Phrases 9 Keep container in a well ventilated place.

Limit Values for Exposure:
Nitrogen: None established.
Argon: None established.
Carbon Dioxide: OSHA PEL: 5,000 ppm.
ACGIH TLV-TWA: 5,000 ppm.
ACGIH TLV-STEL: 30,000 ppm.

Neither this preparation nor the substances contained in it have been listed as carcinogenic by National Toxicology Program, I.A.R.C., or OSHA.

SIGNS AND SYMPTOMS:

Acute Exposure:

Eye Contact: Non-irritating gas.

Skin Contact: Non-irritating gas.

Inhalation: Vapor is heavier than air and can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause lightheadedness, giddiness, shortness of breath, muscular tremors, and weakness, acrocyanosis. Also unconsciousness or even death.

Ingestion: Non-irritating gas. Not a likely route of entry.

Chronic Overexposure: No data available.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

FOR ENVIRONMENT:

Carbon dioxide is a global warming gas.

4. FIRST AID MEASURES

Eye Contact: Immediately flush eyes with water for a minimum of 15 minutes. If redness, itching or a burning sensation develops, get medical attention. Treat for frostbite if necessary.

Skin Contact: If redness, itching or a burning sensation develops, get medical attention. Treat for frostbite if necessary.

Inhalation: Remove victim to fresh air. If cough or other respiratory symptoms occur, consult medical personnel. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Consult medical personnel.

Ingestion: None needed.

5. FIRE-FIGHTING MEASURES

Non-flammable gas. Use agent appropriate to surrounding material.

Though gas cylinders are equipped with pressure and temperature relief devices, they should be removed from high temperature areas or fires, if safe to do so, to avoid risk of rupture.

There are NO extinguishing media which must not be used for safety reasons.

NO special protective equipment is needed for fire-fighters. Wear protective equipment appropriate for the fire conditions.

6. ACCIDENTAL RELEASE MEASURES

For personal protection: Prevent direct skin and eye contact, see Heading 8.

Clean up: This substance will vaporize into the atmosphere, see Heading 13.

Carbon dioxide is a global warming gas.

7. HANDLING AND STORAGE

7.1. Handling

Care should be taken in handling all chemical substances and preparations.

Secure to prevent falling. Do not move without safety cap in place to prevent damage to valve.

See incompatibility information in Heading 10.

7.2. Storage

Store cylinders with restraints to prevent possibility of rupture. Store as a compressed gas in DOT-approved vessels. Keep safety cap in place while in storage.

See incompatibility information in Heading 10.

Store in original container. Keep tightly closed until used.

Carbon Dioxide is a global warming gas.

7.3. Specific use

The intended or recommended use of this preparation is to discharge a FIRE EXTINGUISHING AGENT.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Exposure limit values

Limit Values for Exposure:

Nitrogen:	None established.
Argon:	None established.
Carbon dioxide:	OSHA PEL: 5,000 ppm, (9,000 mg/m ³).
	ACGIH TLV-TWA: 5,000 ppm, (9,000 mg/m ³).
	ACGIH TLV-STEL: 30,000 ppm, (54,000 mg/m ³).
	IDLH (Immediately Dangerous for Life and Health): 50,000 ppm.

8.2. Exposure controls

8.2.1. Occupational exposure controls

8.2.1.1. Respiratory protection

Exposure to high concentrations requires the use of self-contained breathing apparatus. Other respirators will not protect in an oxygen deficient atmosphere.

8.2.1.2. Hand protection

Use leather gloves when handling cylinders.

8.2.1.3. Eye protection

Use safety glasses with side shields or safety goggles.

8.2.1.4. Skin protection

No special equipment is needed.

8.2.2. Environmental exposure controls

None needed. The components of this product are normal atmospheric gases.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance:	Colorless gas.
Odor:	None.

9.2. Important health, safety, and environmental information

pH:	7 (at 25 °C).
Boiling point/boiling range:	-320 °C.
Flash point:	None to boiling.
Flammability (solid/gas):	Not flammable.
Explosive properties:	Not explosive.
Oxidizing properties:	Not an oxidizer.
Vapor Pressure:	2205 psi @ 70 °F.
Relative Density (Water = 1):	0.084 lbs/ft ³ .
Solubility:	
– Water solubility:	Carbon dioxide: 88 ml per 100 ml @ 20 °C. Nitrogen: Insoluble. Argon: Insoluble.
– Fat solubility:	Not soluble.
Partition coefficient, n-octanol/water:	Not determined.
Viscosity:	Not determined.
Vapor density (Air = 1):	1.0.
Evaporation rate (Butyl acetate = 1):	< 1, water only evaporates.

9.3. Other information

Auto-ignition temperature:	Does not ignite.
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10. STABILITY AND REACTIVITY

10.1. Conditions to avoid

Extremely high temperatures, as in a fire may cause a cylinder to fail.

There are NO known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.

10.2. Materials to avoid

Because of Carbon Dioxide: (Al + Na₂O₂), (Mg + Na₂O), Cs₂O, Li, K, Mg(C₂H₅)₂, KC₂H, Na, NaK, and Ti.

10.3. Hazardous decomposition products

Normally stable.

Hazardous polymerization will NOT occur.

There are no hazardous combustion or decomposition products.

11. TOXICOLOGICAL INFORMATION

Carbon dioxide:

Inhalation LC_{LO} (human) = 100,000 ppm/min.

Can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause dizziness, shortness of breath, unconsciousness, or even death.

12. ECOLOGICAL INFORMATION

12.1. Ecotoxicity

This preparation consists of normal atmospheric gases.

12.2. Mobility

This preparation consists of normal atmospheric gases.

12.3. Persistence and degradability

This preparation consists of normal atmospheric gases.

12.4. Bioaccumulative potential

This preparation consists of normal atmospheric gases.

12.5. Other adverse effects

Ozone depletion potential: None.

Photochemical ozone creation potential: None.

Global warming potential: Carbon dioxide is a global warming gas.

13. DISPOSAL CONSIDERATIONS

Carbon dioxide is a global warming gas.

This preparation consists of normal atmospheric gases.

14. TRANSPORT INFORMATION

Hazard Class or Division: Compressed Gas N.O.S. (Mixture of compressed nitrogen, argon, and carbon dioxide), Class 2.2, UN1956.

Label: Nonflammable gas.

Emergency response guide page number: 126; EMS (Intl): 2-04.

For additional transport information, contact Ansul Incorporated.

Carbon dioxide is a global warming gas.

15. REGULATORY INFORMATION

EU Classification: Nonflammable gas.
 R Phrases: None.
 S Phrases: 9 Keep container in a well ventilated place.
 Exposure Limit Values:
 Nitrogen: None established.
 Argon: None established.
 Carbon dioxide: OSHA PEL: 5,000 ppm, (9,000 mg/m³).
 ACGIH TLV-TWA: 5,000 ppm, (9,000 mg/m³).
 ACGIH TLV-STEL: 30,000 ppm, (54,000 mg/m³).
 IDLH (Immediately Dangerous for Life and Health): 50,000 ppm.
 EINECS Status: All components are included in EINECS inventories or are exempt from listing.
 EPA TSCA Status: All components are included in TSCA inventories or are exempt from listing.
 Canadian DSL (Domestic Substances List): All components are included in the DSL or are exempt from listing.
 Environmental restrictions: None are known.
 Restrictions on Marketing and Use: None are known.
 Refer to any other national measures that may be relevant.

16. OTHER INFORMATION

(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

HEALTH:	<u>1</u>	4. Severe Hazard
FLAMMABILITY:	<u>0</u>	3. Serious Hazard
REACTIVITY:	<u>0</u>	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:

This product is rated: **A Compressed Gas.**

Format is from directive 2001/58/EC.
 EINECS data is from <http://exb.jrc.it/existing-chemicals/>
 Data used to compile the data sheet is from Ansul Material Safety Data Sheet, February, 2002.
 Toxicological information added from the EINICS ESIS (Existing Substances Information System).
 A rating under WHMIS has been added, following the Canadian guidelines.

17. DISCLAIMER

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT, BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. ANSUL SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

N/A = Not Applicable

NDA = No Data Available

MSDS available at <http://www.ansul.com>

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