



MATERIAL SAFETY DATA SHEET

Nitrogen (Expellant)

A UTC Fire & Security Company

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

Product Name	Nitrogen (Expellant)
Other Trade Names	N ₂
Product Description	Expellant
Manufacturer/Supplier	Fenwal Protection Systems
Address	400 Main Street Ashland, MA 01721 USA
Phone Number	(508) 881-2000
Chemtrec Number	(800) 424-9300
(for emergencies only)	(703) 527-3887 (International)
Revision Date:	February 9, 2012
MSDS Date:	February 9, 2009

Safety Data Sheet according to EC directive 2001/59/EC and OSHA's Hazcom Standard (29 CFR 1910.1200)

2. HAZARDS IDENTIFICATION

EU Main Hazards Non Flammable Gas

Routes of Entry

Eye contact - Inhalation - Skin contact

Carcinogenic Status

Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs

Respiratory System

Health Effects - Eyes

Non-irritating gas

Health Effects - Skin

Non-irritating gas

Health Effects - Ingestion

Ingestion is not a possible route of exposure.

Health Effects - Inhalation

Avoid direct inhalation of undiluted gas. Can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS#/Codes	Concentration	R Phrases	EU Classification
Nitrogen	7727-37-9 EC#231-783-9	100%	None	Non Flammable Gas

4. FIRST AID MEASURES

Eyes

No specific measures.

Skin

No specific measures.

Ingestion

Ingestion is not considered a potential route of exposure.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately.

Advice to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media

All known extinguishing media can be used. Use extinguishing media appropriate for containers in the area.

Unusual Fire and Explosion Hazards

Containers may explode in heat of fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. ACCIDENTAL RELEASE MEASURES

Material is a normal atmospheric gas. Remove leaking cylinder to a safe place. Ventilate the area. Wear self contained breathing apparatus when entering confined spaces unless atmosphere is proven to be safe.

7. HANDLING AND STORAGE

Cylinders should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll cylinders. Do not drop cylinders or permit them to strike against each other. Never apply flame or localized heat directly to any part of the cylinder. Store away from sources of heat or ignition. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards**Nitrogen**

None

Engineering Control Measures

Use with adequate ventilation (natural or mechanical), especially in a confined space.

Respiratory Protection

Not normally required. In oxygen deficient atmospheres, use a self contained breathing apparatus, as an air purifying respirator will not provide protection.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Hand Protection

Use leather or sturdy work gloves when handling cylinders.

Eye Protection

Chemical goggles or safety glasses with side shields.

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Compressed gas
Color	Colorless
Odor	None
Specific Gravity	Not applicable
Boiling Range/Point (°C/F)	-321°F
Flash Point (PMCC) (°C/F)	Not Flammable
Solubility in Water	0.2 g/l
Vapor Density (Air = 1)	0.97.
Vapor Pressure	Not determined
Gas Density	0.075 lb/ft ³ @70°F as vapor
Evaporation Rate	Not applicable

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

Extremely high temperatures - flames

Materials to Avoid

None known

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

None

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Simple asphyxiant.

Chronic Toxicity/Carcinogenicity

This product is not expected to cause long term adverse health effects.

Genotoxicity

This product is not expected to cause any mutagenic effects.



A UTC Fire & Security Company

MATERIAL SAFETY DATA SHEET

Nitrogen (Expellant)

11. TOXICOLOGICAL INFORMATION

Reproductive/Developmental Toxicity

This product is not expected to cause adverse reproductive effects.

12. ECOLOGICAL INFORMATION

Mobility

Nitrogen occurs naturally in the atmosphere.

Persistence/Degradability

Nitrogen occurs naturally in the atmosphere.

Bio-accumulation

Nitrogen occurs naturally in the atmosphere.

Ecotoxicity

No data available

13. DISPOSAL CONSIDERATIONS

Dispose of container in accordance with all applicable local and national regulations. Do not cut, puncture or weld on or near to the container. If spilled, contents will vaporize to the atmosphere.

14. TRANSPORT INFORMATION

DOT CFR 172.101 Data	Nitrogen, compressed, 2.2, UN1066
UN Proper Shipping Name	Nitrogen, compressed
UN Class	(2.2) Non-Flammable Gas
UN Number	UN1066
UN Packaging Group	Not applicable

15. REGULATORY INFORMATION

EU Label Information

Classification and labelling have been performed according to EU directives 67/548/EEC and 99/45/EC including amendments(2001/60/EC and 2006/8/EC)

EU Hazard Symbol and Indication of Danger.

Non Flammable Gas

15. REGULATORY INFORMATION

R phrases

None

S phrases

S9 Keep container in a well ventilated place.

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

15. REGULATORY INFORMATION

EINECS Listing

All ingredients in this product are listed on the European Inventory of Existing Commercial Chemical Substances (EINECS) or the European List of New Chemical Substances (ELINCS) or are exempt from listing.

DSL/NDSL (Canadian) Listing

All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

WHMIS Classification

A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

MA Right To Know Law

All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at or above the de minimis concentration include: Nitrogen

PA Right To Know Law

This product contains the following chemicals found on the Pennsylvania Hazardous Substance List: - Nitrogen

NJ Right To Know Law

This product contains the following chemicals found on the NJ Right To Know Hazardous Substance List: - Nitrogen

California Proposition 65

This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.

SARA Title III Sect. 302 (EHS)

This product does not contain any chemicals subject to SARA Title III Section 302.

SARA Title III Sect. 304

This product does not contain any chemicals subject to SARA Title III Section 304.

SARA Title III Sect. 311/312 Categorization

- Immediate (Acute) Health Hazard - Pressure Hazard

SARA Title III Sect. 313

This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Health - 0

NFPA Code for Flammability - 0

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards - None

HMIS Ratings

HMIS Code for Health - 0

HMIS Code for Flammability - 0

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8



MATERIAL SAFETY DATA SHEET

Nitrogen (Expellant)

A UTC Fire & Security Company

16. OTHER INFORMATION

Abbreviations

N/A: Denotes no applicable information found or available

CAS#: Chemical Abstracts Service Number

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

NTP: National Toxicology Program

IARC: International Agency for Research on Cancer

R: Risk

S: Safety

Prepared By: EnviroNet LLC.

The information contained herein is based on data believed to be accurate. However, no representation, warranty, or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for its own particular use. Fenwal Protection Systems assumes no responsibility for personal injury or property damage resulting from use, handling or from contact with this product.
