1. IDENTIFICATION

Product Name: Nitrogen (Expellant)
Other Names: N₂

Recommended use of the chemical and restrictions on use:

Identified uses: Fire Extinguishing Expellant
Restrictions on use: Consult applicable fire protection codes

Company Identification:
Badger Fire Protection
8767 Seminole Trail, Suite 202
Ruckersville, VA 22968
USA

Customer Information Number: (434)-964-3200
Emergency Telephone Number: (800) 424-9300
CHEMTREC Number: (703) 527-3887 (International)

Issue Date: November 23, 2016
Supersedes Date: October 1, 2015

Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification
Gas under pressure – compressed gas
Simple Asphyxiant

Label Elements
Hazard Symbols

Signal Word: Warning

Hazard Statements
Contents under pressure; may explode if heated.
May displace oxygen and cause rapid suffocation.

Precautionary Statements
Prevention
Do not enter confined space unless adequately ventilated.
In case of inadequate ventilation wear respiratory protection.

Response
None

Storage
Keep container tightly closed.
Protect from sunlight and store in well-ventilated place.

Disposal
None
2. HAZARD IDENTIFICATION

Other Hazards
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.

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
- Acute oral toxicity: 0%
- Acute dermal toxicity: 0%
- Acute inhalation toxicity: 0%
- Acute aquatic toxicity: 100%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: N₂
This product is a substance.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen</td>
<td>7727-37-9</td>
<td>100%</td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Description of necessary 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.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

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

Specific hazards arising from the chemical
Containers may explode in heat of fire.
5. **FIRE - FIGHTING MEASURES**

**Special Protective Actions for Fire-Fighters**
Wear full protective clothing and self-contained breathing apparatus as appropriate for specific fire conditions.

6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**
Remove leaking cylinder to a safe place. Ventilate the area. Leaks inside confined spaces may cause suffocation as oxygen is displaced and should not be entered without a self-contained breathing apparatus.

**Environmental Precautions**
None - Material is a normal atmospheric gas.

**Methods and materials for containment and cleaning up**
None

7. **HANDLING AND STORAGE**

**Precautions for safe handling**
Containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll containers. Do not drop containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the containers.

**Conditions for safe storage**
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**

**Control parameters**
Exposure limits are listed below, if they exist.

**Nitrogen**
None established

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

**Individual protection measures**

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

**Skin Protection**
Use leather or sturdy work gloves when handling cylinders.

**Eye/Face Protection**
Chemical goggles or safety glasses with side shields.

**Body Protection**
Normal work wear.
9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**
  - Physical State: Compressed gas
  - Color: Colorless
- **Odor**
  - None
- **Odor Threshold**
  - No data available
- **pH**
  - Not applicable
- **Gas Density**
  - 0.075 lb/ft$^3$ @70°F as vapor
- **Boiling Range/Point (°C/F)**
  - -196°C/-321°F
- **Melting Point (°C/F)**
  - -210°C/-346°F
- **Flash Point (PMCC) (°C/F)**
  - Not flammable
- **Vapor Pressure**
  - No data available
- **Evaporation Rate (BuAc=1)**
  - Not applicable
- **Solubility in Water**
  - 0.2 g/l
- **Vapor Density (Air = 1)**
  - 0.97
- **VOC (%)**
  - Not applicable
- **Partition coefficient (n-octanol/water)**
  - No data available
- **Viscosity**
  - Not applicable
- **Auto-ignition Temperature**
  - No data available
- **Decomposition Temperature**
  - No data available
- **Upper explosive limit**
  - Not explosive
- **Lower explosive limit**
  - Not explosive
- **Flammability (solid, gas)**
  - Not flammable

10. STABILITY AND REACTIVITY

- **Reactivity**
  - Containers may rupture or explode if exposed to heat.

- **Chemical Stability**
  - Stable under normal conditions.

- **Possibility of hazardous reactions**
  - Hazardous polymerization will not occur.

- **Conditions to Avoid**
  - Extremely high temperatures

- **Incompatible Materials**
  - None known

- **Hazardous Decomposition Products**
  - None

11. TOXICOLOGICAL INFORMATION

- **Acute Toxicity**
  - Simple asphyxiant.
11. TOXICOLOGICAL INFORMATION

Specific Target Organ Toxicity (STOT) – single exposure
Exposure to nitrogen gas at high concentrations can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations can cause dizziness, shortness of breath, unconsciousness or asphyxiation.

Specific Target Organ Toxicity (STOT) – repeat exposure
No data available.

Serious Eye damage/Irritation
No data available.

Skin Corrosion/Irritation
No data available.

Respiratory or Skin Sensitization
No data available.

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
No data available.

Reproductive Toxicity
No data available.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
No data available

Mobility in soil
Nitrogen occurs naturally in the atmosphere.

Persistence/Degradability
Nitrogen occurs naturally in the atmosphere.

Bioaccumulative Potential
Nitrogen occurs naturally in the atmosphere.

Other adverse effects
No relevant studies identified.
13. DISPOSAL CONSIDERATIONS

Disposal Methods
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

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment.

Special Precautions for Shipping:
Individuals must be certified as Hazardous Material Shipper for all transportation modes. Pressurized Fire Extinguishers are considered a hazardous material by the US Department of Transportation and Transport Canada.

Bulk Shipments:
DOT CFR 172.101 Data
UN Proper Shipping Name
Nitrogen, compressed
UN Class
(2.2) Non-Flammable Gas
UN Number
UN1066
UN Packaging Group
Not Applicable
Classification for AIR
Consult current IATA Regulations prior to shipping by air.
Transportation (IATA)
Classification for Water
Consult current IMDG Regulations prior to shipping by water.

Fire Extinguishers:
DOT CFR 172.101 Data
UN Proper Shipping Name
Fire extinguishers
UN Class
(2.2)
UN Number
UN1044
UN Packaging Group
Not applicable
Classification for AIR
Consult current IATA Regulations prior to shipping by air.
Transportation (IATA)
Classification for Water
Consult current IMDG Regulations prior to shipping by water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

15. REGULATORY INFORMATION

United States TSCA Inventory
All components of this product are in compliance with the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory
All ingredients in this product have been verified for inclusion on the Domestic Substance List (DSL).
15. REGULATORY INFORMATION

SARA Title III Sect. 311/312 Categorization
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 Physical Hazard - 0
HMIS Code for Personal Protection - See Section 8
*Chronic

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service
IARC: International Agency for Research on Cancer
LCLo: Lethal concentration low
N/A: Denotes no applicable information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value

Revision Date: November 23, 2016
Replaces: October 1, 2015
Changes made: Update to company address.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.
Prepared By: EnviroNet LLC.
The information and recommendations presented in this SDS are based on sources believed to be accurate. Badger Fire Protection assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the material for their particular purposes. In particular, we make NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use or disposal of the material is in accordance with applicable Federal, State, and local laws and regulations.