



STRIKE FIRST
CORPORATION

SAFETY DATA SHEET

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

Product Identifier

Product Name Nitrogen

Other means of identification

Synonyms Nitrogen gas

Recommended use of the chemical and restrictions on use

Recommended Use Expellant Gas for Fire Extinguishers

Uses advised against Not for human or animal drug use

Details of the Supplier of the Safety Data Sheet

Manufacturer STRIKE FIRST CORPORATION
777 Tapscott Rd. Toronto Ontario
Canada M1X 1A2

Contact Information Phone: (416) 299-7767
Fax: (416) 299-8039
Email: info@strike-first.com

Emergency Telephone Number CHEMTREC 1-800-424-9300 or
(703) 527-3887

2. HAZARDS IDENTIFICATION

This SDS covers the Nitrogen generated by Strike First in-house and the expellant gas used in pressurized fire extinguisher. GHS classifications for both are listed below.

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Label elements, including precautionary statements

<u>Hazard Symbol</u>	<u>Signal Word</u>	<u>Hazard Statement</u>
	<u>Warning</u>	<u>CONTAINS GAS UNDER</u> <u>PRESSURE - COMPRESSED GAS;</u> <u>MAY EXPLODE IF HEATED.</u> <u>MAY DISPLACE OXYGEN AND</u> <u>CAUSE RAPID SUFFOCATION.</u>

Emergency Overview

The product contains no substances which at their concentration, are considered to be hazardous to health.

Appearance Colorless

Physical State Gas

Odor Odorless

Precautionary Statements

General: Read and follow all Safety Data Sheets (SDS'S) before use. Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand. Close valve after each use and when empty. Use equipment rated for cylinder pressure. Do not open valve until connected to equipment prepared for use. Use a back flow preventative device in the piping. Use only equipment of compatible materials of construction.

Prevention: None

Response: None

Storage: Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.

Disposal: None

Hazards not otherwise classified: In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.

Unknown Toxicity

Not available

Other information

No information available.

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms

Nitrogen, compressed

Chemical Name	CAS No	Weight - %
Nitrogen gas (generated)	7727-37-9	99.5 – 100

4. FIRST AID MEASURES

First aid measures

Eye contact: Adverse effects not expected from this product. In case of eye irritation; rinse immediately with plenty of water. Consult an ophthalmologist if irritation persists

Skin contact: Adverse effects not expected from this product.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may give oxygen. Call a physician.

Ingestion: Ingestion is not considered a potential route of exposure.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects: No information available.

Indication of any immediate medical attention and special treatment if needed

Notes to Physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

None Known.

Specific hazards arising from the chemical

Reactivity Under certain condition, nitrogen can react violently with lithium, neodymium, titanium (above 1472 °F/800 °C), and magnesium to form nitrides. At high temperature, it can also combine with oxygen or hydrogen

Hazardous Combustion Products

Decomposition products may include the following materials: nitrogen oxides.

Protective equipment and precautions for firefighters

Firefighting Instruction: Evacuate all personnel from the danger area. Use self-contained breathing apparatus (SCBA) and protective clothing. Immediately cool containers with water from maximum distance. Stop flow of gas if safe to do so, while continuing cooling water spray. Remove ignition sources if safe to do so. On-site fire brigades must comply with OSHA 29 CFR 1910.156 and applicable standards under 29 CFR 1910 Subpart L—Fire Protection.

Protection during firefighting: Compressed gas: Asphyxiant. Suffocation hazard by lack of oxygen.

Special protective equipment for firefighter: Standard protective clothing and equipment (Self Contained Breathing Apparatus) for fire fighters.

Specific Method: Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas containers to rupture. Prevent water used in emergency cases from entering sewers and drainage systems. Stop flow of product if safe to do so.

Use water spray or fog to knock down fire fumes if possible.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency Personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Avoid breathing gas. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For non-emergency Personnel: If specialized clothing is required to deal with the spillage, take note of any information on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental Precautions: Ensure emergency procedures to deal with accidental gas releases are in place to avoid contamination of the environment. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small Spill: Immediately contact emergency personnel. Stop leak if without risk.
Large Spill: Immediately contact emergency personnel. Stop leak if without risk.
Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment. Contains gas under pressure. Avoid contact with eyes, skin and clothing. Avoid breathing gas.

Advice on general Occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Storage: Store in accordance with local regulations. Store in a segregated and approved area. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Keep container tightly closed and sealed until ready for use. Container temperatures should not exceed 52 °C (125 °F).

Incompatible Products: Not available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Guidelines

Nitrogen (CAS #7727-37-9)		Nitrogen, Compressed (CAS #7727-37-9)	
ACGIH	USA OSHA	ACGIH	USA OSHA
Not Established	Not Established	Not Established	Not Established

ACGIH: American Conference of Government Industrial Hygienist

OSHA: Occupational Safety and Health Administration

Appropriate engineering controls

- Engineering measures:** Good ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental measures:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures, such as personal protective equipment

- Eye/face protection:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with sideshields.
- Skin and body protection:** Wear metatarsal shoes and work gloves for handling, and protective clothing where needed. Wear appropriate chemical gloves wherever contact with product is possible.
- Respiratory protection:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hygiene measures:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES**Physical and Chemical Properties**

- | | |
|---|-----------------------------|
| Physical state: | Gas |
| Appearance: | Colorless gas. |
| Molecular mass: | 28 g/mol |
| Color: | Colorless. |
| Odor: | No odor warning properties. |
| Odor threshold: | No data available |
| pH: | Not applicable. |
| Relative evaporation rate (butyl acetate=1): | No data available |

Relative evaporation rate (ether=1):	Not applicable.
Melting point:	-210 °C
Freezing point:	No data available
Boiling point:	-195.8 °C
Flash point:	No data available
Critical temperature:	-149.9 °C
Auto-ignition temperature:	Not applicable.
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available
Vapor pressure:	Not applicable.
Relative vapor density at 20 °C:	No data available
Relative density:	No data available
Density:	1.16 kg/m ³
Relative gas density:	0.97
Solubility:	Water: 20 mg/l
Log Pow:	Not applicable.
Log Kow:	Not applicable.
Viscosity, kinematic:	Not applicable.
Viscosity, dynamic:	Not applicable.
Explosive properties:	Not applicable.
Oxidizing properties:	None.
Explosion limits:	No data available

10. STABILITY AND REACTIVITY

Reactivity	Under certain conditions, nitrogen can react violently with lithium, neodymium, titanium (above 1472°F/800°C), and magnesium to form nitrides. At high temperature, it can also combine with oxygen and hydrogen.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	May occur.
Conditions to avoid	None under recommended storage and handling conditions.
Incompatible materials	None.
Hazardous decomposition products	None.

11. TOXICOLOGICAL INFORMATION

Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.

Numerical measures of toxicity
Not available.

Acute toxicity estimates
Not available.

Information on toxicological effects

Acute toxicity:	Not classified
Skin corrosion/irritation:	Not classified pH: Not applicable.
Serious eye damage/irritation:	Not classified pH: Not applicable.
Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
Specific target organ toxicity (single exposure):	Not classified
Specific target organ toxicity (repeated exposure):	Not classified
Aspiration hazard:	Not classified

12. ECOLOGICAL INFORMATION

Ecotoxicity:

No ecological damage cause by this product.

Persistence and Degradability

Chemical	Persistence and Degradability
Nitrogen (CAS #7727-37-9)	No ecological damage cause by this product
Nitrogen, Compressed (CAS #7727-37-9)	No ecological damage cause by this product

Bioaccumulative potential

Chemical	Log Pow	Log Kow	Bioaccumulative Potential
Nitrogen (CAS #7727-37-9)	Not applicable	Not applicable	No ecological damage cause by this product
Nitrogen, Compressed (CAS #7727-37-9)	Not applicable	Not applicable	No ecological damage cause by this product

Mobility in soil

Chemical	Mobility in soil	Ecology - soil
Nitrogen (CAS #7727-37-9)	Not data available	No ecological damage cause by this product
Nitrogen, Compressed (CAS #7727-37-9)	Not data available	No ecological damage cause by this product

Other adverse effects

Effect on Ozone: None

Effect on the global warming: None

13. DISPOSAL INFORMATION

Waste treatment methods

Disposal methods:	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261. To determine whether the altered material is a hazardous waste, consult the appropriate state, regional, or local regulations for additional requirements.
Contaminated Packaging:	Dispose of contents/containers in accordance with local regulations.

14. TRANSPORTATION INFORMATION

<u>DOT</u>	NOT REGULATED
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
<u>TDG</u>	Not Regulated
<u>MEX</u>	Not Regulated
<u>ICAO</u>	Not Regulated
<u>IATA</u>	Not Regulated
Proper Shipping Name	NON REGULATED
Hazard Class	N/A
<u>IMDG/IMO</u>	Not Regulated
Hazard Class	N/A
<u>IRD</u>	Not Regulated
<u>ADR</u>	Not Regulated
<u>ADN</u>	Not Regulated

NOTES:

This product is not defined as a hazardous material under U.S. Department of Transportation (DOT) 49 CFR 172, or by Transport Canada "Transportation of Dangerous Goods" regulations.

Special Precautions for Shipping:

If shipped in a stored pressure-type fire extinguisher, as a non-flammable, nontoxic inert expellant gas, the fire extinguisher is considered a hazardous material by the US Department of Transportation and Transport Canada. The proper shipping name shall be FIRE EXTINGUISHER and the UN designation is UN 1044. The DOT hazard class is Limited Quantity when shipped via highway or rail. Use a Non-Flammable Gas label (class 2.2) when shipping via air.

15. REGULATORY INFORMATION

U.S. Federal regulations:	TSCA 8(a) CDR Exempt/Partial exemption: This material is listed or exempted.
	United States inventory (TSCA 8b): This material is listed or exempted.

Clean Air Act Section 112**(b) Hazardous Air****Pollutants (HAPs):** Not listed**Clean Air Act Section 602****Class I Substances:** Not listed**Clean Air Act Section 602****Class II Substances:** Not listed**DEA List I Chemicals****(Precursor Chemicals):** Not listed**DEA List II Chemicals****(Essential Chemicals):** Not listed**SARA 302/304****Composition/information on ingredients**

No products were found.

SARA 304 RQ: Not applicable.**SARA 311/312****Classification :** Sudden release of pressure**Composition/information on ingredients**

Name	%	Fire Hazard	Sudden Release of Pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Nitrogen	99-100	No	Yes	No	No	No

State Regulations

Massachusetts: This material is listed.
New York: This material is not listed.
New Jersey: This material is listed.
Pennsylvania: This material is listed.

International regulations**International lists****National inventory**

Australia: This material is listed or exempted.
Canada: This material is listed or exempted.
China: This material is listed or exempted.
Europe: This material is listed or exempted.
Japan: Not determined.
Republic of Korea: This material is listed or exempted.
Malaysia: Not determined.
New Zealand: This material is listed or exempted.
Philippines: This material is listed or exempted.
Taiwan: This material is listed or exempted.

Canada**WHMIS (Canada):**

Class A: Compressed gas.

CEPA Toxic substances: This material is not listed.**Canadian ARET:** This material is not listed.

Canadian NPRI: This material is not listed.

Alberta Designated Substances: This material is not listed.

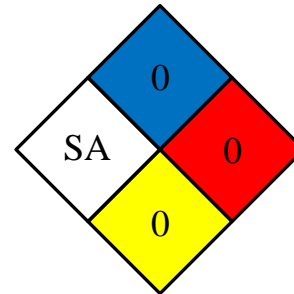
Ontario Designated Substances: This material is not listed.

Quebec Designated Substances: This material is not listed.

16. OTHER INFORMATION

NFPA	Health Hazards	0	Flammability	0	Instability	0	Physical and Chemical Hazards – Personal Protection
HMIS	Health Hazards	0	Flammability	0	Instability	0	SA

Health	0
Flammability	0
Physical hazards	0



Prepared By: Strike First Corporation
777 Tapscott Road
Scarborough ON
M1X 1A2 Canada

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of this publication. This information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the test.

END OF SAFETY DATA SHEET