



SAFETY DATA SHEET

Section 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: IG-100 Fire Extinguishing System
Other Identifiers: IG-100 Inert Gas Fire Extinguishing Agent,
Nitrogen, Nitrogen Fire Extinguishing System,
Nitrogen Fire Extinguishing Agent

Product Use: Fire Extinguishing Agent

Models: 94792 Cylinder Assembly, 80 Liter, Nitrogen, 300 Bar
94712 Cylinder Assembly, 80 Liter, Nitrogen, 300 Bar

Manufacturer: Janus Fire Systems
Internet Address: www.janusfiresystems.com
Address: 1102 Rupcich Dr. Crown Point, IN 46307
Company Telephone: (219) 663-1600
E-mail Address: info@janusfiresystems.com
Emergency Contacts: Chemtrec - Cust No: 1013723
North America/Mexico (English) 800-424-9300
Central America +52 55 8526 4930
South America +55 11 4349 1359
Europe, Middle East, Africa +44 20 3885 0382
Asia, Oceania +65 3163 8374

Issued: July 31, 2023

Section 2. HAZARDS IDENTIFICATION

GHS – Classification

Health	Environmental	Physical
Acute Toxicity- Category 5	None	None
Skin Corrosion/Irritation	None	None
Skin Sensitization: NO	None	None
Eye: 2B	None	None
Carcinogen: Category None	None	None

GHS – Label Symbol(s):



GHS – Signal Word(s): Gas Under Pressure

Other Hazards Not Resulting in Classification:

Simple asphyxiant. May displace oxygen and cause rapid suffocation.
May cause frostbite if contact with skin or eyes.

GHS – Hazard Phrases

GHS Hazard	GHS Codes(s)	Code Phrase(s)
Physical	H229	Pressurized container; may burst if heated.
Health	H01	May displace oxygen and cause rapid suffocation.
Precautionary:		
General	P202 CGA-PG02 CGA-PG10+ CGA-PG20 CGA-PG12 CGA-PG27	Do not handle until all safety precautions have been read and understood. Protect from sunlight when ambient temperature exceeds 52C (125F). Use only with equipment of compatible materials of construction and rated for cylinder pressures. Do not open valve until connected to equipment prepared for use. Read and follow the Safety Data Sheet (SDS) before use.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration
Nitrogen	7727-37-9	100%
Trade Names: Nitrogen: N, Nitrogen gas, Molecular nitrogen, Dinitrogen		

Note: Pressurized extinguisher uses nitrogen as a fire extinguishing agent.

Section 4. FIRST AID MEASURES

Skin Exposure:

Remove contaminated clothing and flush affected areas with lukewarm (NOT HOT) water.

Inhalation:

Remove victim to fresh air and keep comfortable for breathing.

Section 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Use suitable extinguishing material for surrounding fire.

Protection of Firefighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Products of Combustion

Oxides of nitrogen

Section 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Keep unnecessary people away, isolate hazard area and deny entry. Ventilate closed spaces before entering.

Methods for Containment and Cleanup:

Stop leak if possible without personal risk. Reduce vapors with water spray. Remove sources of ignition.

Section 7. HANDLING AND STORAGE

Handling:

See precautions in Section 2. Only trained personnel should handle this product. Always use approved personal protective equipment.

Storage:

Keep pressurized container in a dry and well-ventilated place.

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated area. Keep separated from incompatible substances.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	Threshold Limit Value -TLV (ppm)
Nitrogen	Not available

Engineering Controls

No Specific controls are needed.

Personal Protective Equipment (PPE)

Eye Protection: Wear splash resistant safety goggles.
Skin Protection: Wear chemical protective clothing, including gloves.
Respiratory Protection: Use self-contained breathing apparatus.

General Hygiene considerations

- Avoid breathing vapor or mist
- Avoid contact with eyes and skin
- Wash thoroughly after handling and before eating or drinking

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

	Physical State / Physical Form	Appearance / Color	Odor	Flash Point	Flammability	Partition Coefficient
Nitrogen	Gas	Colorless	Odorless	Nonflammable	Nonflammable	0

	Autoignition Temperature	Upper Explosive Limits	Lower Explosive Limits	Boiling Point	Freezing Point	Vapor Pressure
Nitrogen	Nonflammable	Not available	Not available	-321 F (-196 C)	-346 F (-210 C)	Not available

	Vapor Density	Specific Gravity	Water Solubility	pH	Evaporation Rate	Viscosity
Nitrogen	0.967	Not applicable	1.6% @ 20 C	0	Not applicable	0.01787 cP @ 27 C

	Molecular Weight	Molecular Formula	Density	Volatility	Solvent Solubility
Nitrogen	28.014	N2	Not available	1	Soluble: Liquid ammonia

Section 10. STABILITY AND REACTIVITY

Stability: Stable at normal temperature and pressure.

Conditions to avoid: Avoid heat, flames, sparks and other sources of ignition.

Incompatible Materials: Metals, Oxidizing Agents

Hazardous Decomposition Products: Oxides of nitrogen

Possibility of Hazardous Reactions: Will not polymerize

Section 11. TOXICOLOGICAL INFORMATION

The toxicology information is calculated for the mixture.

Acute Toxicity Estimates (ATE) of the mixture.

Oral ATE (mg/kg)	Not available
Inhalation ATE (ppm)	Not available
Dermal ATE (mg/kg)	Not available

Additional health hazards:

OSHA-H01: MAY DISPLACE OXYGEN AND CAUSE RAPID SUFFOCATION.

Skin Corrosion/Irritation	Not available
Eye Damage/Irritation	Not available
Respiratory or Skin Sensitization	Not available
Germ Cell Mutagenicity	Not available
Carcinogenicity	Not available
Reproductive Toxicity	Not available
STOT – single exposure	Not available
STOT – repeated exposure	Not available
Aspiration Hazard	Not available

Section 12. ECOLOGICAL INFORMATION

Fate and Transport

	Eco toxicity	Persistence / Degradability	Bioaccumulation / Accumulation	Mobility in Environment
Nitrogen	Fish toxicity: 0	Not Available.	Not Available.	Not Available.

Section 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable regulations. Do not dispose in sewers or waterways. Recycle if possible to do so.

Section 14 TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.:	UN 1066
Proper shipping name:	nitrogen, Compressed
Class:	2.2
Packing group:	N/A
Labels:	Non-flamm. gas
Packing instruction (cargo aircraft):	200
Packing instruction (passenger aircraft):	200

IMDG-Code

UN number:	UN 1066
Proper shipping name:	nitrogen, Compressed
Class:	2.2
Packing group:	N/A
Labels :	2.2
EmS Code:	F-C, S-V
Marine pollutant:	no

Domestic regulation

49 CFR

UN/ID/NA number:	UN 1066
Proper shipping name:	nitrogen, Compressed
Class:	2.2
Packing group:	N/A
ERG Code:	ERG No. 121
Marine pollutant:	no

Section 15. REGULATORY INFORMATION

International Inventory Status: All ingredients are on the following inventories

Country(ies)	Agency	Status
United States of America	TSCA	Yes
Canada	DSL	Yes
Europe	EINECS/ELINCS	Yes
Australia	AICS	Yes, as part of chemical compounds
Japan	MITI	Yes
South Korea	KECL	Yes

U.S. Regulations

	CERCLA Sections	SARA 355.30	SARA 355.40
Nitrogen	Not regulated	Not regulated	Not regulated

SARA 370.21

	Acute	Chronic	Fire	Reactive	Sudden Release
Nitrogen	Yes	No	No	No	Yes

SARA 372.65

Nitrogen	Not regulated
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OSHA Process Safety

Nitrogen	Not regulated
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State Regulations

	CA Proposition 65
Nitrogen	Not listed

Canadian Regulations

	WHMIS Classification
Nitrogen	A

Section 16. OTHER INFORMATION

NFPA Rating Health, Fire, and Reactivity

Nitrogen	0, 0, 0
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0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Hazardous Material Information System (U.S.A.)

Health	0
Flammability	0
Physical Hazards	3