

# INERGEN SAFETY DATA SHEET

According to 29 CFR 1910.1200



## SECTION 1. IDENTIFICATION

### PRODUCT IDENTIFIER

Product name INERGEN, IG-541  
Gaseous mixture; Nitrogen, Argon, Carbon dioxide

### OTHER MEANS OF IDENTIFICATION

No information available

### RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE

Recommended use Fire Extinguishing Agent  
Recommended restrictions No information available

### MANUFACTURER/IMPORTER/SUPPLIER/DISTRIBUTOR INFORMATION

#### SUPPLIER

Fire Eater A/S  
Vølundsvvej 17  
3400 Hillerød  
Denmark

#### DISTRIBUTER

Fire Eater USA Inc.  
875 N. Michigan Avenue, Suite 3950  
Chicago, IL 60611  
USA

Web address: [www.fire-eater.com/](http://www.fire-eater.com/)

E-mail: [info@fire-eater.com](mailto:info@fire-eater.com)

### EMERGENCY TELEPHONE

1-800-704-9215

Contract number MIS7464519

+1 (312) 596-5772

## SECTION 2. HAZARD(S) IDENTIFICATION

### OSHA REGULATORY STATUS

This material is considered as hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

### CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Physical Hazards	Gasses under pressure - compressed gas
Health Hazards	Not classified
Environment Hazards	Not classified
OSHA defined hazards	Simple Asphyxiant

### GHS LABEL ELEMENTS

Hazard pictogram



Signal word

**DANGER**

Hazard statements

Contains gas under pressure; may explode if heated.  
OSHA-H01 - May displace oxygen and cause rapid suffocation.

Precautionary statements

Prevention

Not applicable.

Response

Not applicable.

Storage

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

Disposal

Not applicable.

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Hazard(s) not otherwise classified (HNOC)

None Known

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### MIXTURES

CHEMICAL NAME	CAS NUMBER	PERCENTAGE (WT/WT)%
Nitrogen (N2)	7727-37-9	52
Argon (Ar)	7440-37-1	40
Carbon dioxide (CO2)	124-38-9	8

Contains no components or impurities which influence the classification of the product.

## SECTION 4. FIRST AID MEASURES

### DESCRIPTION OF FIRST AID MEASURES

Inhalation: Remove victim to uncontaminated area wearing self-contained breathing apparatus. Keep victim warm and rested.  
Call a doctor.

Skin contact: Adverse effects not expected from this product.

Eye contact: Adverse effects not expected from this product.

Ingestion: As this product is a gas, refer to inhalation section.

### MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No additional information available.

### INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

None.

## SECTION 5. FIREFIGHTING MEASURES

### EXTINGUISHING MEDIA

Suitable extinguishing media Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media None known.

### SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

No reactivity hazards other than the effects described below.

### ADVICE FOR FIREFIGHTERS

Firefighting instructions: Depressurize the cylinders by releasing the fire extinguishing system if connected in this.  
Do not activate the release valve if cylinder is not securely fastened.  
Remove ignition source if safe to do so.  
Move containers from fire area if this can be done without risk.  
Use water spray to keep fire-exposed containers cool.

Protection during firefighting: Compressed gas: asphyxiant, suffocation hazard by lack of oxygen.  
Use fire control measures appropriate for the surrounding fire.

Special methods: Exposure to fire and heat radiation may cause gas receptacles to rupture.  
Cool endangered receptacles with water spray jet from a protected position.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Non-emergency personnel	<p>No action shall be taken involving any personal risk or without suitable training.</p> <p>Evacuate surrounding areas.</p> <p>Keep unnecessary and unprotected personnel from entering.</p> <p>Avoid breathing gas.</p> <p>Provide adequate ventilation.</p> <p>Wear appropriate respirator when ventilation is inadequate.</p> <p>Put on appropriate personal protective equipment.</p> <p>Stay upwind.</p>
Emergency responder	<p>Monitor oxygen level to determine concentration of released product.</p> <p>Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.</p> <p>Ensure adequate air ventilation.</p> <p>Act in accordance with local emergency plan.</p>

### ENVIRONMENTAL PRECAUTION

None

### METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Containment:	None
Clean up:	Ventilate thoroughly with fresh air.

## SECTION 7. HANDLING AND STORAGE

### PRECAUTIONS FOR SAFE HANDLING

Put on appropriate personal protective equipment (see Section 8).

Contains gas under pressure. Do not puncture or incinerate container.

Use equipment rated for cylinder pressure.

Protect cylinders from physical damage; do not drag, roll, slide, or drop.

Use a suitable hand truck for cylinder movement. Do not use valve cap/guard for lifting.

### CONDITIONS FOR SAFE STORAGE

Store in accordance with local regulations.

Store away from direct sunlight in a dry, cool and well-ventilated area. Keep container tightly closed and sealed until ready for use.

Cylinders can be stored horizontal or vertical.

Valve cap/guard must be fitted to the cylinder and only to be removed when the cylinder is securely fastened.

Cylinders are always to be firmly secured to prevent falling or being knocked over.

Cylinder temperatures should not exceed 65 °C (150 °F).

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### CONTROL PARAMETERS

Exposure limits are listed below, if they exist.

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## OCCUPATIONAL EXPOSURE LIMITS

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None of the ingredient in this product is listed.

### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Carbon dioxide (CO <sub>2</sub> ) (CAS# 124-38-9)	PEL (TWA)	5000 ppm; 9000 mg/m <sup>3</sup>

### US. OSHA Table Z-2 (29 CFR 1910.1000)

None of the ingredient in this product is listed.

### US. OSHA Table Z-3 (29 CFR 1910.1000)

None of the ingredient in this product is listed.

### US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon dioxide (CO <sub>2</sub> ) (CAS# 124-38-9)	TLV (TWA)	5000 ppm
	TLV (STEL)	30,000 ppm

### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon dioxide (CO <sub>2</sub> ) (CAS# 124-38-9)	REL (TWA)	5000 ppm; 9000 mg/m <sup>3</sup>
	REL (STEL)	30,000 ppm; 54,000 mg/m <sup>3</sup>

Appropriate engineering controls	Oxygen detectors should be used when asphyxiating gases may be released. Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Ensure exposure is below occupational exposure limits (where available).
Respiratory equipment	No information available.
Skin protection	No information available.
Eye protection	No information available.
Thermal hazard protection	None necessary.
Environmental exposure controls	None necessary.
Other information	Wear safety glasses (EN ISO 16321-1 – Eye and face protection for occupational use (previously EN 166)). Wear safety shoes while handling containers (EN ISO 20345 - Personal protective equipment - Safety footwear).
General hygiene Measure	No information available.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

Physical State	Gas
Color	Colorless
Odor	Odorless
Odor threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Initial boiling point and boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	Nonflammable, does not sustain combustion
Upper/lower flammability or explosive limits	No information available
Vapor pressure	No information available
Vapor density	1.416 kg/ m3 (t = 20°C, p = 1.0132 bar)
Relative density	1.18 (@t= 20°C, p = 1.0132 bar)
Solubility(ies)	No information available
Partition coefficient: n-octanol/water	No information available
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Molar mass	34.08 g/mol

## SECTION 10. STABILITY AND REACTIVITY

### REACTIVITY

No specific test data related to reactivity is available for this product or its ingredients.

### CHEMICAL STABILITY

The product is stable.

### POSSIBILITY OF HAZARDOUS REACTIONS

Under normal conditions of storage and use, hazardous reactions will not occur.

### CONDITIONS TO AVOID

None.

### INCOMPATIBLE MATERIALS

None.

### HAZARDOUS DECOMPOSITION PRODUCTS

None.

## SECTION 11. TOXICOLOGICAL INFORMATION

### INFORMATION ON LIKELY ROUTES OF EXPOSURE

Ingestion	See Inhalation.
Inhalation	Increased breathing.
Skin contact	None.

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Eye contact None.

## SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS

None.

## DELAYED AND IMMEDIATE EFFECTS AND ALSO CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE

Information on hazard classes None.

Long term exposure: None.

Potential chronic health effects: None.

Numerical measures of toxicity: None.

## NUMERICAL MEASURES OF TOXICITY

There is no information available for this product.

## INFORMATION ON HAZARD CLASSES

Acute toxicity None

Skin corrosion/irritation None

Serious eye damage/irritation None

Respiratory or skin sensitization Stimulate the respiratory system to increase breathing.

Germ cell mutagenicity None

Carcinogenicity None

Reproductive toxicity None

Specific target organ toxicity -single exposure None

Specific target organ toxicity -single exposure None

Aspiration hazard Stimulate the respiratory system to increase breathing.

## SECTION 12. ECOLOGICAL INFORMATION

### ECOTOXICITY

Not classified harmful to the environment.

### NUMERICAL MEASURES OF TOXICITY

There is no information available for this product.

TOXICITY None.

PERSISTENCE AND DEGRADABILITY Not relevant.

BIO ACCUMULATIVE POTENTIAL Not relevant.

MOBILITY IN SOIL Not relevant.

ECOLOGICAL EFFECTS No known ecological damage is caused by this product.

## SECTION 13. DISPOSAL CONSIDERATIONS

### WASTE TREATMENT METHODS

May be vented to atmosphere in a well-ventilated place.

Do not discharge into any place where its accumulation could be dangerous.

Refer to the code of practice of EIGA ([www.eiga.org](http://www.eiga.org)).

Containers must be disposed of in a safe way.

Do not puncture or incinerate container.

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## SECTION 14. TRANSPORT INFORMATION

UN NUMBER	DOT	IMDG	IATA
UN PROPER SHIPPING NAME	UN 1956	UN 1956	UN 1956
TRANSPORT HAZARD CLASS(ES)	Compressed gas, n.o.s. (Nitrogen, Argon) 2.2	Compressed gas, n.o.s. (Nitrogen, Argon) 2.2	Compressed gas, n.o.s. (Nitrogen, Argon) 2.2
PACKING GROUP	-	-	-
ENVIRONMENTAL HAZARDS	No	Marine Pollutant: No	No
SPECIAL PRECAUTIONS FOR USER	Quantity limitations: Passenger aircraft/rail: 75 kg Cargo air- craft only: 150 kg Stowage category: A Packaging: Exceptions: 306,307 Non-bulk: 302,305 Bulk: 314,315 No information available	EmS: Fire: F-C Spillage: S-V Packing instructions: P200 Special provision: 274 Limited quantities: 120 ml Exempted quantities: E1 Stowage category: A	Passenger and cargo, and cargo only aircraft: Allowed Packing instruction: P200
TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE NOTES			

## SECTION 15. REGULATORY INFORMATION

### US FEDERAL REGULATIONS

All components of this product are listed on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

TSCA SECTION 12(B) EXPORT NOTIFICATION (40 CFR 707, SUBPT. D)

None of the ingredient in this product is listed.

US. OSHA SPECIFICALLY REGULATED SUBSTANCES (29 CFR 1910.1001-1050)

None of the ingredient in this product is listed.

CERCLA HAZARDOUS SUBSTANCE LIST (40 CFR 302.4)

None of the ingredient in this product is listed.

SARA 302/304 EXTREMELY HAZARDOUS SUBSTANCE

None of the ingredient in this product is listed.

SARA 311/312 HAZARDOUS CHEMICAL

None of the ingredient in this product is listed.

SARA 313 (TRI REPORTING)

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None of the ingredient in this product is listed.

## OTHER FEDERAL REGULATIONS

### **Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

None of the ingredient in this product is listed.

### **Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

None of the ingredient in this product is listed.

### **Safe Drinking Water Act (SDWA)**

None of the ingredient in this product is listed.

## US STATE REGULATIONS

### **US. New Jersey Worker and Community Right-to-Know Act**

All the ingredients in this product are listed.

### **US. Pennsylvania Worker and Community Right-to-Know Law**

All the ingredients in this product are listed.

### **US. California Proposition 65**

#### **US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT):**

None of the ingredient in this product is listed.

## INTERNATIONAL INVENTORIES

### **AUSTRALIA - AICS**

All the ingredients in this product are listed.

### **CANADA - DSL/NDL**

Nitrogen (CAS# 7727-37-9) – Listed in DSL

Argon (CAS# 7440-37-1) – Listed in DSL

Carbon dioxide (CO<sub>2</sub>) (CAS# 124-38-9) – Listed in DSL

### **CHINA - IECSC**

All the ingredients in this product are listed.

### **EUROPE - EINECS/ELINCS/NLP**

All the ingredients in this product are listed.

### **JAPAN - ENCS**

Carbon dioxide (CO<sub>2</sub>) (CAS# 124-38-9) – Listed

### **KOREA - ECL**

All the ingredients in this product are listed.

### **NEW ZEALAND -NZIOc**

All the ingredients in this product are listed.

### **PHILIPPINES - PICCS**

All the ingredients in this product are listed.



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## US - TSCA

All the ingredients in this product are listed.

## WASSENAAR ARRANGEMENT

No ECCN number as all components are free to export without any restrictions.

## SECTION 16. OTHER INFORMATION

INFORMATION SOURCES According to 29 CFR 1910.1200

REVISION DATE 02/26/2024

REVISION -

### DISCLAIMER

This Safety Data Sheet has been established in accordance with the applicable United States Occupational Safety and Health Administration (US OSHA).

Classification in accordance with calculation methods of OSHA Hazard Communication Standard (29 CFR 1910.1200).

Validated by:

SRS

[www.msds-eu.com](http://www.msds-eu.com)