

Safety data sheet

INERGEN, IG-541

Version 1.0

Effective date: 11-06-2024



SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY / UNDERTAKING

1.1 Product identifier

Trade name: INERGEN, IG-541.

1.2 Relevant identified uses of the substance or mixture and uses advised against:

Product use: Fire extinguishing agent.

Uses advised against: Only use for above.

1.3 Details of the Supplier of the safety data sheet:

Company: Fire Eater A/S
Vølundsvej 17
3400 Hillerød
Denmark
www.fire-eater.com
info@fire-eater.com

1.4 Emergency telephone number:

Use your national or local emergency number.
Company emergency number: +45 7022 2769.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture according to CLP No 1272/2008/GB CLP.

Press. Gas (Comp.), H280.

2.2 Label elements CLP No 1272/2008/GB CLP:

Hazard pictograms:



Signal word:

Warning

Hazard statements:

H280 Contains gas under pressure; may explode if heated.

Precautionary statements:

General:

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Prevention:

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Response:

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Storage:

P403 Store in a well ventilated place.

P410 Protect from sunlight when ambient temperature exceeds 52°C

Disposal:

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Additional information:

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2.3 Other hazards:

Contains no PBT or vPvB substances according to REACH No 1907/2006.

This mixture does not contain substances with endocrine disrupting properties in accordance with the criteria laid down in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance:

The product is a mixture.

3.2 Mixture:

CAS/EC No	REACH No	Name	Content %	Classification CLP
7727-37-9 / 231-783-9	Exempted	Nitrogen	52	Press. Gas (Comp.); H280.
7440-37-1 / 231-147-0	Exempted	Argon	40	Press. Gas (Comp.); H280.
124-38-9 / 204-696-9	Exempted	Carbon dioxide	8	Press. Gas (Comp.); H280.

See full text of H-phrases in section 16. Occupational limits are listed in section 8 if these are available.

SECTION 4. FIRST AID MEASURES

4.1 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: Normally no hazard.

Eye contact: Normally no hazard.

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

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4.2 Most important symptoms and effects, both acute and delayed:

None known.

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media: Use extinguishing media appropriate for the surrounding fire.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture:

Contains gas under pressure; may explode if heated.

5.3 Advice for firefighters:

Firefighting instructions for use:

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.

Protection during firefighting:

Compressed gas: asphyxiant, suffocation hazard by lack of oxygen.

Special methods:

Use fire control measures appropriate for the surrounding fire.

Cool endangered receptacles with water spray jet from a protected position.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

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.

Wear self-contained breathing apparatus.

Stay upwind. Monitor oxygen level to determine concentration of released product. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

6.2 Environmental precautions:

No special precautions necessary.

6.3 Methods and material for containment and cleaning up:

Ventilate thoroughly with fresh air.

6.4 Reference to other sections:

See section 8 for personal protection.

See section 13 for disposal.

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SECTION 7. HANDLING AND STORAGE

7.1 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, slide, or drop.
Use a suitable hand truck for cylinder movement. Do not use valve cap/guard for lifting.

7.2 Conditions for safe storage, including any incompatibilities:

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.

7.3 Specific end use(s): This product should only be used for applications described in section 1.2

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters - Occupational exposure limits EH-40 (Great Britain):

CAS No:	Name:	Limits:	Comments:
124-38-9	Carbon dioxide	Long-term value (TWA): 5000 ppm Long-term value (TWA): 9150 mg/m ³ Short-term value (STEL): 15000 ppm Short-term value (STEL): 27400 mg/m ³	-

DNEL / PNEC:

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8.2 Exposure controls:

Appropriate technical measures:

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.

General information / Hygiene measures:

No special measures necessary.

Personal protective equipment:

Only CE-marked personal protection equipment should be used.

Respiratory protection:

Wear self-contained breathing apparatus.

Hand protection:

Use suitable gloves according to the task.

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Eye protection: Wear tightly safety goggles if risk of contact. EN 166.

Body protection: Firefighter clothes.

Measures to avoid environmental exposure:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties.

Physical state:	Gas
Colour:	Colorless
Odour:	Odorless
Melting point/freezing point:	Not relevant/no data
Boiling point:	Not relevant/no data
Flammability:	Does not burn
Lower and upper explosion limit:	Not relevant/no data
Flash point:	Not relevant/no data
Auto-ignition temperature:	Not relevant/no data
Decomposition temperature:	Not relevant/no data
pH:	Not relevant/no data
Kinematic viscosity:	Not relevant/no data
Solubility:	Not relevant/no data
Partition coefficient n-octanol/water:	Not relevant/no data
Vapour pressure:	1.416 kg/m ³
Density and/or relative density:	1.18 - 20°C
Relative vapour density:	Not relevant/no data
Particle characteristics:	Not relevant/no data

9.2 Other information:

Molar mass: 34.08 g/mol

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: No dangerous reaction known under conditions of normal use.

10.2 Chemical stability: Stable under the recommended storage conditions.

10.3 Possibility of hazardous reactions:

No risk of hazardous reactions during normal use and storage.

10.4 Conditions to avoid: None known.

10.5 Incompatible materials: None known.

10.6 Hazardous decomposition products:

None at recommended storage conditions and use.

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SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008/GB CLP.

Acute toxicity: Not classified.

Skin corrosion/irritation: Not classified.

Serious eye damage/irritation: Not classified.

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.

11.2 Information on other hazards:

Endocrine disrupting properties:

The product/substance has no endocrine disrupting properties.

Other information:

Stimulate the respiratory system to increase breathing.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity: Not classified as hazardous to the environment.

12.2 Persistence and degradability:
No data.

12.3 Bioaccumulative potential:
No data.

12.4 Mobility in soil: No data.

12.5 Result of PBT and vPvB assessment:

The product does not contain substances that meet the criteria for PBT or vPvB.

12.6 Endocrine disrupting properties:

The product/substance has no endocrine disrupting properties.

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12.7 Other adverse effects: None known.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

The coding of a waste stream is based on the application of the product by the consumer – end-user.

Option:

EAC-code: 16 05 04* gases in pressure containers (including halons) containing dangerous substances.

Packing: If well emptied: 15 01 11' metallic packaging containing a dangerous solid porous matrix (for example asbestos), including empty pressure containers.

SECTION 14. TRANSPORT INFORMATION

This product is classified as dangerous to transport.

Passenger and cargo, and cargo only aircraft: Allowed Packing instruction: P200.

	ADR/RID	IMDG/IMO
14.1 UN number or ID number	1956	1956
14.2 UN proper shipping name	COMPRESSED GAS N.O.S. (Nitrogen, argon)	COMPRESSED GAS N.O.S. (Nitrogen, argon)
14.3 Transport hazard class(es)	2.2	2.2
14.4 Packing group	Not relevant	Not relevant
14.5 Environmental hazards - MP	No F-C, S-V	No F-C, S-V
Other informations	LQ: 120 ml. TUNNEL: E Stowage category: A	LQ: 120 ml. TUNNEL: E Stowage category: A

14.6 Special precautions for user:

Not relevant.

14.7 Maritime transport in bulk according to IMO instruments:

Not relevant.

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SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:

Sources:

Current ADR regulations 2023. Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013. Regulation (EU) 2016/425 of 9 March 2016 on personal protective equipment. Hazardous Waste (England and Wales) Regulations 2005 (as amended). EC regulation 1907/2006 (REACH) Directive 2000/532/EC. Seveso directive: 96/82/EC. EC regulation No 2020/878. CLP regulation No 1272/2008. REACH regulation 1907/2006. GB CLP.

Additional information: -

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.

SECTION 16. OTHER INFORMATION

Full text of H-phrases as mentioned in section 3:

H280 Contains gas under pressure; may explode if heated.

Additional information:

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

Descriptions of possible used abbreviations:

BCF Bioconcentration factor.

BOD Biochemical Oxygen Demand.

CAS Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances).

COD Chemical oxygen demand.

DNEL Derived No-Effect Level.

EC50 Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval.

IMDG International Maritime Dangerous Goods Code.

LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval.

LD50 Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval.

log KOW n-Octanol/water.

MARPOL International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant").

PBT Persistent, Bioaccumulative and Toxic.

PNEC Predicted No-Effect Concentration.

UN RTDG UN Recommendations on the Transport of Dangerous Good.

vPvB Very Persistent and very Bioaccumulative.

Validated by:

SRS

www.msds-eu.com