INERGEN Safety Data Sheet

EU regulation 1907/2006, 1272/2008, 453/2010

Section 1: Identification

- Product — Gas mixture, 52% Nitrogen, 40% Argon, 8% CO2
  IG541, INERGEN
- Supplier — Fire Eater
  Vølundsvej 17, 3400 Hillerød, Denmark
  www.fire-eater.com, email: info@fire-eater.com
- Emergency response — +45 7022 2769
- Product use — Fire Extinguishing Systems

Section 2: Hazard(s) Identification

- OSHA/HCS status — This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
- Classification of the substance or mixture
  GASES UNDER PRESSURE – Compressed gas
  H280, Full text of H-phrases: see section 16
- 67/548/EEC (DSD) or 1999/45/EC (DPD)
  Not classified
- Adverse physicochemical, human health and environmental effects
  No additional information available

GHS Label elements

- Hazard pictograms (CLP)

- Signal word — Warning
- Hazard statement — H280 – Contains gas under pressure; may explode if heated
  OSHA-H01 - May displace oxygen and cause rapid suffocation.

Precaution statements

- General — Read and follow all Safe Data Sheets (SDS's) before use.
- Storage — P403 – Store in a well-ventilated place.
  P410 - Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52°C/125°F.
- Disposal — Not applicable

Section 3: Composition/Information on Ingredients

- Mixture

Name	Product identifier	%	Classification Directive 67/548/EC	Classification Regulation 1272/208 (CLP)
Nitrogen	CAS No 7727-37-9 EC No 231-783-9 REACH No ANNEX IV	52	Not classified	H280: Contains gas under pressure; may explode if heated
Argon	CAS No 7440-37-1 EC No 231-147-0 REACH-No ANNEX IV	40	Not classified	H280: Contains gas under pressure; may explode if heated
Carbon dioxide	CAS No 124-38-9 EC No 204-696-9 REACH No ANNEX IV	8	Not classified	H280: Contains gas under pressure; may explode if heated

- REACH Registration: All components are listed in Annex IV of Regulation EC 1907/2006 (REACH) and are exempted from registration in accordance with article 2(7)(a). Contains no other components or impurities which will influence the classification of the product.

Section 4: First-Aid Measures

Description of necessary first-aid instructions

- Inhalation: Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Apply artificial respiration if breathing stopped.
- 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: Fire-Fighting Measures

Extinguishing media

- Suitable extinguishing media:
  Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media :
  Non 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.
- Special methods: Use fire control measures appropriate for the surrounding fire.
  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:
  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.
  Stay upwind.
- Emergency responders:
  Monitor oxygen level to determine concentration of released product.
  Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.
  Ensure adequate air ventilation.
  Act in accordance with local emergency plan.
- Environmental precautions:
  None

Methods and materials for containment and cleaning up

- Clean-up procedures: Ventilate with fresh air

Section 7: Handling and Storage

Precautions for safe handling

- General

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 for lifting.

Conditions for safe storage

- 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

- General:

All components are exempted from REACH registration in accordance with article 2(7)(a). Annex IV of Regulation EC 1907/2006 (REACH)
Contains no other components or impurities which will influence the classification of the product.

Occupational exposure limits

- General:

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

Nitrogen	52%	Oxygen Depletion [Asphyxiant]	
Argon	40%	Oxygen Depletion [Asphyxiant]	
Carbon dioxide	8%	OSHA PEL: 5.000 ppm ACGIH TLV (2012) TWA: 5.000 ppm STEL: 30.000 ppm	

- 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).

- Thermal hazard protection:

None necessary.

- Environmental exposure controls :

None necessary.

- Other information :

Wear safety shoes while handling containers. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

Section 9: Physical and Chemical Properties

Appearance:

- Physical state: Gas
- Color: Colorless
- Odor: Odorless
- Flammability: Non flammable, does not sustain combustion
- Molar mass 34.08 g/mol
- Vapor density: 1.416 kg/ m^3 (t = 20°C, p = 1.0132 bar)
- Relative density: 1.18 (@t= 20°C, p = 1.0132 bar)

Section 10: Stability and Reactivity

- Reactivity: No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability: The product is stable
- Possible hazardous reactions:
  Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous decompositions products:
  None
- Hazardous polymerization:
  None

Section 11: Toxicological Information

- General: All components are exempted from REACH registration in accordance with article 2(7)(a). Annex IV of Regulation EC 1907/2006 (REACH)
  Contains no other components or impurities which will influence the classification of the product.
- Information on toxicological effects

Acute toxicity:	None
Irritation/corrosion:	None
Sensitization:	Stimulate the respiratory system to increase breathing
Mutagenicity:	None
Carcinogenicity:	None
Reproductive toxicity:	None
Teratogenicity:	None

- Specific target organ toxicity (single or repeated exposure) None
- Aspiration hazard: Stimulate the respiratory system to increase breathing
- Potential acute health effects

Eye contact:	None
Inhalation	Increased breathing
Skin contact	None
Ingestion	See Inhalation

Symptoms related to the physical, chemical and toxicological characteristics

- None

Delayed and immediate effects and also chronic effects from short and long term exposure Eye contact

- None

Long term exposure **None**

Potential chronic health effects **None**

Numerical measures of toxicity **None**

Section 12: Ecological Information

- Toxicity None
- Persistence and degradability Not relevant
- Bio accumulative potential: Not relevant
- Soil/water partition Coefficient): Not relevant
- Ecological effects: No known ecological damage caused by this product.

Section 13: Disposal Considerations (non-mandatory)

- Disposal 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).
  Container must be disposed of in a safe way.
  Do not puncture or incinerate container

Section 14: Transport Information (non-mandatory)

- UN number: UN 1956

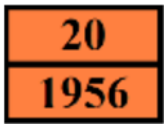
Labeling

- ADR, IMDG, IATA, DOT, TDG.

2.2

ADR (road transport)

- Shipping Name: COMPRESSED GAS, N.O.S. (Nitrogen, Argon)
- H.I. nr: 20
- Transport hazard class: 2
- Classification code 1A
- Packing Instructions: P200
- Special provision: 274, 655
- Limited quantity: 120ml
- Exempted quantities: E1
- Transport category: 3
- Hazard identification (Kemler No)
  20
- Orange plates:



- Tunnel Restriction: E: Passage forbidden through tunnels of category E
- EAC code: 2TE

ICAO-Ti/IATA-DGR

- Shipping Name: Compressed gas n.o.s. (Nitrogen, Argon)
- Class: 2.2
- Passenger and Cargo Aircraft
  Allowed
  Packing Instructions: P200
- Cargo Aircraft only
  Allowed
  Packing Instructions: P200

IMDG (Sea transport)

- Shipping Name: COMPRESSED GAS, N.O.S. (Nitrogen, Argon)
- Class: 2.2
- Emergency Schedule (EmS)
  Fire: F-C
  Spillage: S-V
- Packing Instructions: P200
- Special provisions: 274
- Limited quantites: 120 ml
- Excempted quantities: E1
- Stowahe category: A

Section 15: Regulatory Information (non-mandatory)

EU-Regulation

- REACH — All components are exempted from REACH registration in accordance with article 2(7)(a). Annex IV of Regulation EC 1907/2006 (REACH)
  Contains no other components or impurities which will influence the classification of the product.
- Contains no substances with Annex XVII restriction

Wassenaar Arrangement

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

Section 16: Other Information

- Training: INMON0001
- This Safety Data Sheet has been established in accordance with the applicable European Union legislation.
  Classification in accordance with calculation methods of regulation (EC) 1272/2008 CLP / (EC) 1999/45 DPD.
- This SDS is issued 2018-11 and replace revision 2016-11

END OF SAFETY DATASHEET