

**SAFETY DATA SHEET (MSDS)  
FOODFRESH (GRADE 2)**

Please ensure that this SDS is received by the appropriate persons

Review Date: 10/11/2021 v01

Emergency: 0860 02 02 02

Document Number: AFX-SDS-0043

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product:** Foodfresh 2  
**Chemical:** N<sub>2</sub>  
**Formula:**  
**Trade Name:** Foodfresh 2  
**Colour Coding:** Shoulder – Black  
 Body - French grey  
 Valve guard – White  
**Product code:** 518702-SE-C  
**Company Identification:** African Oxygen Limited  
 Grayston Office Park  
 Building 7, 128 Peter Road  
 Sandown, Sandton, 2196  
 Tel. No: (011) 490-0400  
 Fax No: (011) 490-0530  
 Email: [customer.service@afrox.linde.com](mailto:customer.service@afrox.linde.com)  
 www.afrox.com  
**Emergency Numbers:** 0860 02 02 02 (Afrox)

**GHS Classification:** Compressed gas (Category 1)

**GHS Pictogram:**



**GHS Signal Words:** Warning

**GHS Hazard Statements:** H280  
 - Contains gas under pressure, may explode if heated.

**GHS Precautionary Statements:** **Storage:** P410+P403: Protect from sunlight and store in a well-ventilated place.  
**Other hazards that do not result in classification:** None.

**2. HAZARD IDENTIFICATION**

**Classification:** Classification under the Globally Harmonized System of classification and labelling of chemicals (GHS).

**Emergency Overview:** Colour: None  
 Odour: None  
 Taste: Acidic  
 Physical State: Compressed gas  
 Form: Gas

**Main Hazards:**

- All cylinders are portable gas containers and must be regarded as pressure vessels at all times.
- Nitrogen does not support life.
- It can act as a simple asphyxiant by diluting the concentration of oxygen in air below the levels necessary to support life.
- All cylinders are transportable gas containers.

**Adverse Health Effects:**

- Inhalation of nitrogen in excessive concentrations can result in dizziness, nausea, vomiting, loss of consciousness and death.

**Chemical Hazards:** Nitrogen is relatively inert to most materials under ordinary conditions. It becomes more reactive at elevated temperatures, and combines with hydrogen, oxygen and some metals.  
 No known effect.

**Biological Hazards:**

**Vapour Inhalation:**

- As nitrogen acts as a simple asphyxiant death may result from errors in judgement, confusion, or loss of consciousness which prevents self-rescue.
- At low oxygen concentrations, unconsciousness and death may occur in seconds without warning.

**Eye Contact:** No known effect.  
**Skin Contact:** No known effect.  
**Ingestion:** (See "Vapour Inhalation" above).

**3. COMPOSITION OF INGREDIENTS**

**Chemical name:** Nitrogen (N<sub>2</sub>)  
**Chemical family:** Nitrogen  
**CAS No:** 7727-37-9  
**UN No:** 1066  
**ERG No:** 121  
**Hazard class:** 2.2  
**Hazchem Warning:** Non-flammable gas

**4. FIRST AID MEASURES**

**Eye contact:** Adverse effects not expected from this product.  
**Skin Contact:** Adverse effects not expected from this product.  
**Ingestion:** Ingestion is not considered a potential route of exposure.  
**Inhalation:**

- In high concentrations may cause asphyxiation.
- Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation. Remove victim to uncontaminated area wearing self-contained breathing apparatus.
- Keep victim warm and rested.
- Call a doctor.
- Apply artificial respiration if breathing stopped.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media:** Material will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.  
**Unsuitable extinguishing media:** None.  
**Specific Hazards:** None.

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**Special fire fighting procedures:** - In case of fire: Stop leak if safe to do so. -  
- Continue water spray from protected position until container stays cool.  
- Use extinguishants to contain the fire. Isolate the source of the fire or let it burn out.

**Special protective equipment for firefighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, self-contained breathing apparatus.

- Store in accordance with local/regional/national/international regulations.  
- Never use direct flame or electrical heating devices to raise the pressure of a container.  
- Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use.  
- Damaged valves should be reported immediately to the supplier.  
- Close container valve after each use and when empty, even if still connected to equipment.  
- Never attempt to repair or modify container valves or safety relief devices.  
- Replace valve outlet caps or plugs and container caps when supplied as soon as container is disconnected from equipment.  
- Keep container valve outlets clean and free from contaminates particularly oil and water.  
- If user experiences any difficulty operating container valve discontinue use and contact supplier.  
- Never attempt to transfer gases from one container to another.  
- Container valve guards or caps should be in place.  
- Containers should not be stored in conditions likely to encourage corrosion.  
- Stored containers should be periodically checked for general conditions and leakage.  
- Container valve guards or caps should be in place.  
- Store containers in location free from fire risk and away from sources of heat and ignition.  
- Keep away from combustible material.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures:** - Evacuate area.  
- Provide adequate ventilation.  
- Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.  
- Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

**Environmental Precautions: Methods and material for containment and cleaning up:** Prevent further leakage or spillage if safe to do so.  
Provide adequate ventilation.

**Conditions for safe storage, including any incompatibilities:**

**7. HANDLING AND STORAGE**

**Safe Handling:** - Only experienced and properly instructed persons should handle gases under pressure.  
- Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Refer to Afrox's handling instructions.  
- The substance must be handled in accordance with good industrial hygiene and safety procedures.  
- Protect containers from physical damage; do not drag, roll, slide or drop.  
- Do not remove or deface labels provided by the supplier for the identification of the container contents.  
- When moving containers, even for short distances, use appropriate equipment e.g., trolley, hand truck, fork truck etc.  
- Secure cylinders in an upright position at all times, close all valves when not in use.  
- Provide adequate ventilation.  
- Suck back of water into the container must be prevented. Do not allow backfeed into the container. Avoid suckback of water, acid and alkalis.  
- Observe all regulations and local requirements regarding storage of containers.  
- When using do not eat, drink or smoke.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Occupational Exposure Hazards (HCS):** None of the components have assigned exposure limits.

**Engineering Control Measures:** - Consider a work permit system e.g., for maintenance activities.  
- Ensure adequate air ventilation.  
- Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.  
- Oxygen detectors should be used when asphyxiating gases may be released.  
- Systems under pressure should be regularly checked for leakages.  
- Preferably use permanent leak tight connections (e.g., welded pipes).

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**Personal protection:** - Do not eat, drink or smoke when using the product.  
- A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk.  
- Keep self-contained breathing apparatus readily available for emergency use.  
- Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Eyes:** Wear safety glasses when handling cylinders; vapor-proof goggles and a face shield during cylinder changeout or whenever contact with product is possible.

**Hands:** Wear working gloves while handling containers.

**Body protection:** No special precautions.

**Feet:** Wear safety shoes while handling containers.

**Solubility in Water:** 20 mg/l

**Partition coefficient (n-octanol/water):** 0.67

**Autoignition Temperature:** Not applicable.

**Decomposition Temperature:** Not known.

**Viscosity Kinematic viscosity:** No data available.

**Dynamic viscosity:** 0.171 mPa.s (10.9 °C)

**Explosive properties:** Not applicable.

**Oxidising Properties:** Not applicable

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Chemical Name:** Nitrogen

**Chemical Symbol:** N<sub>2</sub>

**Appearance**

**Physical state:** Gas

**Form:** Compressed gas

**Colour:** Colourless

**Odour:** Odourless

**Odour Threshold:** Odour threshold is subjective and is inadequate to warn of over exposure.

**pH:** Not applicable.

**Melting Point:** -210.01 °C

**Boiling Point:** -196 °C

**Sublimation Point:** Not applicable.

**Critical Temp. (°C):** -147.0 °C

**Flash Point:** Not applicable.

**Evaporation Rate:** Not applicable.

**Flammability (solid, gas):** This product is not flammable.

**Flammability limit - upper (%):** Not applicable.

**Flammability limit - lower (%):** Not applicable.

**Vapour pressure:** No reliable data available.

**Vapour density (air=1):** 0.97

**Relative density:** 0.8

**10. STABILITY AND REACTIVITY**

**Reactivity:** No reactivity hazard other than the effects described in sub-section below.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** None.

**Conditions to avoid:** None.

**Incompatible Materials:** No reaction with any common materials in dry or wet conditions.

**Hazardous Decomposition of Products:** Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**11. TOXOLOGICAL INFORMATION**

**Acute Toxicity:** No known effect

**Skin & eye contact:** No known effect

**Chronic Toxicity:** No known effect

**Carcinogenicity:** No known effect

**Mutagenicity:** No known effect

**Reproductive Hazards:** No known effect

**12. ECOLOGICAL INFORMATION**

**Toxicity:** No ecological damage caused by this product.

**Persistence and degradability:** The substance is naturally occurring.

**Mobility in soil:** The substance is a gas, not applicable.

**Ecology - soil:** No ecological damage caused by this product.

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**Results of PBT and vPvB assessment:** Not classified as PBT or vPvB.  
**Other adverse effects:** No ecological damage caused by this product.  
**Effect on ozone layer:** None.  
**Effect on the global warming:** None.

- Regularly check suppliers information sources for updated versions of SDS's.

**Revision Date:** 10/11/2021 v01

**BIBLIOGRAHY**

Compressed Gas Association, Arlington, Virginia  
Handbook of Compressed Gases - 3rd Edition  
Matheson. Matheson Gas Data Book - 6th Edition  
SABS 0625 - Labelling of Dangerous Substances

**EXCLUSION OF LIABILITY**

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**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods:** - Dispose of container via supplier only.  
- For more detailed information or guidance contact the nearest Afrox branch.  
**Disposal of Packaging:** The container is the property of the supplier and the disposal of the containers must only be handled by the supplier.

**14. TRANSPORT INFORMATION**

**Road Transportation**

**UN No.:** 1066  
**Shipping Name:** Nitrogen compressed  
**ERG No.:** 121  
**Class:** 2.2  
**Subsidiary Risk:** Chemical Asphyxiant  
**Hazchem Warning:** Non-flammable gas

**Sea Transportation**

**IMDG:** 1066  
**Shipping Name:** Nitrogen Compressed  
**ERG No.:** 121  
**Class:** 2.2  
**Subsidiary Risk:** Chemical Asphyxiant  
**Label:** Non-flammable gas

**Air Transportation**

**ICAO/IATA Code:** 1066  
**Class:** 2.2  
**Subsidiary risk:** Chemical Asphyxiant  
**Packaging instructions:** - Cargo: Allowed (200)  
- Passenger: Allowed (200)  
**Maximum quantity allowed:** - Cargo: 150 kg  
- Passenger: 75 kg

**15. REGULATORY INFORMATION**

**National legislation:** OHSAct and Regulations 85 of 1993. Refer to SANS 10234.

**16. OTHER INFORMATION**

- Ensure all national/local regulations are observed.  
- Ensure users and relevant persons understand the asphyxiation hazard.