SAFETY DATA SHEET

Nitrogen

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Nitrogen

Trade name: Nitrogen Gas, Gaseous Nitrogen

Additional identification

Chemical name:	Nitrogen
Chemical formula:	N2
INDEX No.	-
CAS-No.	7727-37-9
EC No.	231-783-9
REACH Registration No.	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.

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

Identified uses: Industrial and professional. Laboratory use.

1.3 Details of the supplier of the safety data sheet

Supplier

Peak Scientific Instruments Ltd. Telephone: +44(0)141 812 8100
Fountain Crescent, Inchinnan Business Park
Inchinnan PA4 9RE United Kingdom

E-mail: support@peakscientific.com

1.4 Emergency telephone number: +44(0)141 530 4180

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC as amended.

Not classified

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards

N/A

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Nitrogen
INDEX No.:	-
CAS-No.:	7727-37-9
EC No.:	231-783-9
REACH Registration No.:	Listed in Annex IV/V of Regulation (EC) No 1907/2006 (REACH), exempted from registration.
Purity:	100% The purity of the substance in this section is used for classification only, and does not represent the actual purity of the substance as supplied, for which other documentation should be consulted.

SECTION 4: First Aid Measures

General: 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.

4.1 Description of first aid measures

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.

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.

4.2 Most important symptoms and effects, both acute and delayed: Respiratory arrest. Exposure to oxygen deficient atmosphere may cause dizziness, salivation, nausea or vomiting. Loss of mobilityy/ consciousness.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: None.

Treatment: None.

SECTION 5: Firefighting Measures

General Fire Hazards: N/A

5.1 Extinguishing media

Suitable extinguishing media: Material will not burn. In case of fire in the surroundings: use appropriate extinguishing agent.

Unsuitable extinguishing media: None.

5.2 Special hazards arising from the substance or mixture: None.

Hazardous Combustion Products: None.

5.3 Advice for firefighters

Special fire fighting procedures: In case of fire: Stop leak if safe to do so. 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, SCBA. Guideline: EN 469 Protective clothing for firefighters. Performance requirements for protective clothing for firefighting. EN 15090 Footwear for firefighters. EN 659 Protective gloves for firefighters. EN 443 Helmets for fire fighting in buildings and other structures. EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.

SECTION 6: Accidental Release Measures

6.1 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. Guideline EN 137 Respiratory protective devices - Self-contained open-circuit compressed air breathing apparatus with full face mask - Requirements, testing, marking.
6.2 Environmental Precautions:	Prevent further leakage or spillage if safe to do so.
6.3 Methods and material for containment and cleaning up:	Provide adequate ventilation, monitor oxygen level.
6.4 Reference to other sections:	Refer to sections 8 and 13.

SECTION 7: Handling and Storage:

7.1 Precautions for safe handling: Only experienced and properly instructed persons should handle gases. Provide adequate ventilation. When using do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities: None.

7.3 Specific end use(s): None.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control Parameters

Occupational Exposure Limits None of the components have assigned exposure limits.

8.2 Exposure controls

Appropriate engineering controls:	Ensure adequate air ventilation. Oxygen detectors should be used when asphyxiating gases may be released. Do not eat, drink or smoke when using the product.

Individual protection measures, such as personal protective equipment

General information:	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. The following recommendations should be considered. 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.
Eye/face protection:	Wear eye protection to EN 166 when using gases. Guideline: EN 166 Personal Eye Protection.
Skin protection	
Hand Protection:	No special precautions.
Body protection:	No special precautions.
Other:	No special precautions.
Respiratory Protection:	Not required. Provide ventilation to ensure atmosphere does not drop below 19.5% oxygen
Thermal hazards:	No precautionary measures are necessary.
Hygiene measures:	Specific risk management measures are not required beyond good industrial hygiene and safety procedures. Do not eat, drink or smoke when using the product.
Environmental exposure controls:	Not required

SECTION 9: Physical And Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	Gas
Colour:	Colorless gas
Odour:	Odorless gas
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 to gases and gas
Evaporation Rate:	mixtures. Not applicable to gases
Flammability (solid, gas):	and gas mixtures. This product is
Flammability limit - upper (%):	not flammable.
Flammability limit - lower(%):	not applicable.
Vapour pressure:	not applicable.
Vapour density (air=1):	No reliable data available.
Relative density:	0.97
Solubility(ies)	0.8
Solubility in Water:	20 mg/l
Partition coefficient (n-octanol/water):	0.67 not applicable not
Autoignition Temperature:	applicable.
Decomposition Temperature: Viscosity	Not known.
Kinematic viscosity:	No data available. 0.171 mPa.s
Dynamic viscosity:	(10.9 °C)
Explosive properties:	Not applicable.
Oxidising Properties:	Not applicable.
9.2 Other information:	None.
Molecular weight:	28.01 g/mol (N2)

SECTION 10: Stability and Reactivity

10.1 Reactivity:	No reactivity hazard other than the effects described in sub-section below.
10.2 Chemical Stability:	Stable under normal conditions.
10.3 Possibility of Hazardous Reactions:	None.
10.4 Conditions to Avoid:	None.
10.5 Incompatible Materials:	No reaction with any common materials in dry or wet conditions.
10.6 Hazardous Decomposition Products:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological Information

General information: None.

11.1 Information on toxicological effects

Acute toxicity - Oral
Product: Based on available data, the classification criteria are not met.

Acute toxicity - Dermal
Product: Based on available data, the classification criteria are not met.

Acute toxicity - Inhalation
Product: Based on available data, the classification criteria are not met.

Skin Corrosion/Irritation
Product: Based on available data, the classification criteria are not met.

Serious Eye Damage/Eye Irritation
Product: Based on available data, the classification criteria are not met.

Respiratory or Skin Sensitisation
Product: Based on available data, the classification criteria are not met.

Germ Cell Mutagenicity
Product: Based on available data, the classification criteria are not met.

Carcinogenicity
Product: Based on available data, the classification criteria are not met.

Reproductive toxicity
Product: Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Single Exposure
Product: Based on available data, the classification criteria are not met.

Specific Target Organ Toxicity - Repeated Exposure
Product: Based on available data, the classification criteria are not met.

Aspiration
Product: Not applicable to gases and gas mixtures..
Hazard

SECTION 12: Ecological Information

12.1 Toxicity

Acute toxicity
Product: No ecological damage caused by this product.

12.2 Persistence and Degradability
Product The substance is naturally occurring.

12.3 Bioaccumulative Potential
Product The product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

12.4 Mobility in Soil
Product The substance is a gas, not applicable.

12.5 Results of PBT and vPvB assessment
Product Not classified as PBT or vPvB.

12.6 Other Adverse Effects: No ecological damage caused by this product.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

General information: Do not discharge into any place where its accumulation could be dangerous. Vent to atmosphere in a well ventilated place.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

SECTION 14: Transport Information

Transport considerations, not applicable

SECTION 15: Regulatory information

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

National Regulations	Management of Health and Safety at Work Regulations (1999 No. 3242). The Regulatory Reform (Fire Safety) Order 2005 (2005 No. 1541). Control of Substances Hazardous to Health Regulations (COSHH, 2002 No. 2677). Provision and Use of Work Equipment Regulations (PUWER, 1998 No. 2306). Personal Protective Equipment Regulations (1992 No. 2966). Control of Major Accident Hazards Regulations (COMAH, 2015 No. 483). Pressure Systems Safety Regulations (PSSR, 2000 No. 128). Only products that comply with the food regulations (EC) No. 1333/2008 and (EU) No. 231/2012 and are labelled as such may be used as food additives. This Safety Data Sheet has been produced to comply with Regulation (EU) 453/2010.
15.2 Chemical safety assessment:	No Chemical Safety Assessment has been carried out.

SECTION 16: Other Information

Revision Information:	Not relevant.
Key literature references and sources for data:	Various sources of data have been used in the compilation of this SDS, they include but are not exclusive to: Agency for Toxic Substances and Diseases Registry (ATSDR) (http://www.atsdr.cdc.gov/). European Chemical Agency: Guidance on the Compilation of Safety Data Sheets. European Chemical Agency: Information on Registered Substances http://apps.echa.europa.eu/registered/registered-sub.aspx#search European Industrial Gases Association (EIGA) Doc. 169 Classification and Labelling guide. International Programme on Chemical Safety (http://www.inchem.org/) ISO 10156:2010 Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets. Matheson Gas Data Book, 7th Edition. National Institute for Standards and Technology (NIST) Standard Reference Database Number 69. The ESIS (European chemical Substances 5 Information System) platform of the former European Chemicals Bureau (ECB) ESIS (http://ecb.jrc.ec.europa.eu/esis/). The European Chemical Industry Council (CEFIC) ERICards. United States of America's National Library of Medicine's toxicology data network TOXNET (http://toxnet.nlm.nih.gov/index.html) Threshold Limit Values (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH). Substance specific information from suppliers. Details given in this document are believed to be correct at the time of publication. EH40 (as amended) Workplace exposure limits.

Wording of the R-phrases and H-statements in sections 2 and 3

N/A

Training information:	Users of breathing apparatus must be trained. The hazard of asphyxiation is often overlooked and must be stressed during operator training. Ensure operators understand the hazards.

Classification according to Regulation (EC) No 1272/2008 as amended.

Other information:	Before using this product in any new process or experiment, a thorough material compatibility and safety study should be carried out. Ensure adequate air ventilation. Ensure all national/local regulations are observed. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.
Last revised date:	27.10.2016
Disclaimer:	This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.