SAFETY DATA SHEET

in accordance with Regulation (EC) 1907/2006 (REACH) and its amendments

◘ **V7 –** *amendments in this revision* ◘

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING	
1.1 Product identifier	
◘ **V7** Substance name	NITROGEN, GASEOUS, TECHNICAL GRADE
EC number:	231-783-9
CAS number:	7727-37-9
REACH registration number	This substance is exempted from Registration according to the provisions of Article 2(7)(A) and Annex IV of REACH
NEOCHIM PLC code	10-01◘
1.2 Relevant identified uses of the substance or mixture and uses advised agains	
Relevant identified uses:	At Industrial site and by professional workers. Risk assessment to be performed prior use. Thermal processing of metals and alloys; shield gas for welding processes; inert medium for the transfer of flammable liquids under pressure; blowing and inertness
Uses advised against:	consumer
1.3 Details of the supplier of the safety data sheet	
Manufacturer: Address: ◘ **V7** Tel.: URL website: Email:	NEOCHIM PLC East Industrial Zone, Himkombinatska Str. 6403 Dimitrovgrad, Bulgaria +359 391 65 205 ◘ http:/ / www.neochim.bg neochim@neochim.bg
e-mail address of competent person responsible for the SDS	reach-neochim@neochim.bg
1.4 Emergency telephone number	
◘ **V7** National Toxicology Center Hospital for Active Medical Treatment and Emergency Medicine “N.I.Pirogov”	+ 359 2 9154 233 24/24 h 7/7 d ◘
SECTION 2: HAZARDS IDENTIFICATION	
The most important adverse effects: Gas under pressure. Can cause suffocation at high concentrations due to lack /deficit/ of oxygen. Inhaling the gas can cause headaches, dizziness, vertigo, nausea and loss of coordination. Prolonged inhalation can lead to unconsciousness.	
2.1 Classification of the substance or mixture	
Classification in accordance with Regulation 1272/2008 (CLP) and its amendments at the date of the issue of the document**.**	
Gases under pressure: compressed gases (Press. Gas.), H280 - Contains gas under pressure; may explode if heated.	
2.2 Label elements	
Labelling in accordance with Regulation 1272/2008 (CLP) and its amendments at the date of the issue of the document.	

Hazard pictogram(s):		
Signal word		Warning
Hazard statement(s):	H280	Contains gas under pressure; may explode if heated
Precautionary statement(s):	P410+403 P411	Protect from sunlight. Store in well-ventilated place. Store at temperatures not exceeding 50°C.

2.3 Other hazards

PBT or vPvB criteria.	The substance is not assessed as persistent, bioaccumulative or toxic (PBT) or very persistent and very bioaccumulative (vPvT).
Endocrine disrupting properties	Data lacking

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

◘ V7 3.1 Substances

CAS №	Name	Content, % (v/v)	SCL, M – factor/ATE
7727-37-9	Nitrogen	min 99.5	- ◘

SECTION 4: FIRST- AID MEASURES

4.1 Description of first aid measures

- general notes	Speed is essential. If unconscious, place casualty in a recovery position with head sideways to avoid choking.
- following inhalation:	Immediately move the casualty to fresh air. If not breathing apply artificial respiration. If breathing is difficult qualified person to apply oxygen. Seek medical advice immediately
- following skin contact:	No adverse effects expected.
- following eye contact:	No adverse effects expected.
- following ingestion:	Not considered a potential route of exposure.
- self-protection of the first aider	The first aider must observe and apply all collective and personal protective equipment**.**

4.2 Most important symptoms and effects, both acute and delayed

Due to lack of oxygen, nitrogen inhalation can cause dizziness, vertigo, nausea, and loss of coordination. Prolonged inhalation can lead to unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

Give oxygen if breathing is difficult. Apply general supportive measures and treat symptomatically.

SECTION 5: FIRE - FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:	Use appropriate extinguishing media for surrounding fire.

Unsuitable extinguishing media :	Not applicable (nitrogen is not flammable and does not support combustion)

5.2 Special hazards arising from the substance or mixture

The heat from the fire can lead to a rapid increase a pressure in the cylinders and tanks, which can cause their destruction, accompanied by explosion. Move if it is safe or cool bottles and tanks by spraying water from a safe distance.

5.3 Advice for firefighters

Compressed gas: suffocating. Danger of suffocation due to lack of oxygen.
Heat resistant personnel protective equipment, gloves, boots and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personal

Protective equipment:
Wear suitable personal protective equipment (listed in Section 8 on the safety data sheet)

Emergency procedures:
All activities should be carried out by well-trained staff. Do not allow untrained and unprotected personnel in the area or personnel not involved in the elimination of an incident and its consequences.
Eliminate all possible sources of fire and provide adequate ventilation. Stop the leakage if possible. Isolate every leaking bottle. Prevent entry into sewers, basements, and other areas where accumulation may be hazardous. Stay upwind. Act in accordance with emergency plan**.**

6.1.2 For emergency responder

Heat resistant personnel protective equipment, gloves, boots and self-contained breathing apparatus.

6.2 Environmental precautions

Try to stop gas leak if safe.

6.3 Methods and material for containment and cleaning up

Provide adequate ventilation.

6.4 Reference to other sections

See Section 8 for personal protective equipment and Section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1.1 Pritective measures:	Only experienced and properly instructed persons should handle gases under pressure. Store containers according to national legislation. Keep equipment clean of grease and oil. Use only properly specified equipment which is suitable for this product, its supply temperature and pressure. Comply with the residual pressure requirement of 0.05MPa. Suck back of water into the container must be prevented. Protect cylinders from damage. Use a suitable handcart or trucks to move the bottles - no drag, no roll, no skating, do not knock the bottles. Never lift cylinders without safety caps - cap is intended solely to protect the valve. Never put objects inside the cap (eg wrench, screwdriver, etc.) - this can damage the valve. Open valve slowly to avoid pressure shock. If the valve opens difficult, stop and contact your supplier. After removing the bottle from the installation, re-insert the valve cap and the bottle. After each use, and after emptying the bottle, the valve is closed even if it is connected to the facility. Do not transfer gas from one bottle to another. If the valve opens harder, stop work and call their supplier. Keep labels. When working provide the still gripping the bottle to a stationary object or cart.
7.1.2 Advice on general occupation	Work under a high standard of personal hygiene. Do not eat, drink or smoke in work areas. Wash hands after handling with the product. Remove clothing

hygiene:	and protective equipment before visiting the catering.
7.2 Conditions for safe storage, including any incompatibilities Store away from sources of ignition and heat; segregate from flammable gases and other combustible materials in the store; keep in a well ventilated place at a temperature not exceeding 50°C ; keep away from direct sunlight. Full and empty containers should be stored separately and well secured**.** Full bottles with support are stored in the warehouses in the vertical position. To prevent falls, the bottles are placed in specially prepared cages, or enclosed with barrier. Empty bottles without support can be stored horizontally on wooden frames or racks. Outdoor, bottles with support can be stacked one above the other into regular geometric shapes up to 1.5 m high, placing wooden boards, ropes, or rubber between the horizontal rows. With such an arrangement, the valves of the cylinders are directed in one direction and measures are taken to prevent the uncontrolled movement of the cylinders. Bottles without trays must be stored horizontally, on wooden frames or shelves up to 1.5 m high or in pallets. Gas cylinders should be at least 1 m away from heating radiators. Doors and windows of the oxygen storage should be opened outwards. The floors of the warehouses should be flat, with no slippery surfaces and material to exclude the possibility of sparks being struck. The distance between bottles and heat sources intended to heat indoor storage must be at least 1 meter. Display "No smoking and no light fire " in the areas of storage and usage of oxygen. Do not transport compressed gas cylinders in a confined space (e.g. luggage-carrier of a car).	
◘ V7 **7.3 Specific end use(s):** no information◘	
SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION	
8.1 Control parameters	
Regulated occupational exposure limit values:	No official data available
8.2 Exposure controls	
8.2.1 Appropriate engineering controls:	Providing natural and/or forced ventilation is good industrial practice. Do not release large quantities of the substance in confined spaces. Pressure systems should be periodically checked for omissions.
8.2.2 Individual protection measures, such as personal protective equipment	
Respiratory protection:	Self-contained breathing apparatus or line with compressed air and mask with oxygen deficiency
Hand protection:	Protective gloves when working with bottles
Eye protection:	Chemical goggles (EN 166 is recommended)
Skin and body protection:	Working clothes and boots
◘ V7 Thermal hazard:	No precautionary measures are necessary. ◘
8.2.3 Environmental exposure controls:	The product does not affect the environment.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES	
9.1 Information on basic physical and chemical properties	
a) Physical state	Gas
b) Colour	Colourless
c) Odour	Odourless
d) Melting/Freezing point	- 210°C
e) Boiling point	- 196°C
f) Flammability	Not flammable gas

g) Lower and upper exposure limit	Not applicable
h) Flash-point	Not applicable (gas)
i) Auto-ignition temperature	Not applicable
j) Decomposion temperature	Not known
k) pH	Not applicable
l)Viscosity	Not applicable (gas)
m) Solubility	20 mg/l in water at 20°C and 1bar
n) Partition coefficient n-octanol/water:	Not applicable (gas)
o) Vapour pressure:	Not applicable
p) Density and/or relative density	1.2504 kg/m^3 (0^{o}C, 0.1MPa)
q) Relative vapour density(air = 1)	0.967
r) Particle characteristics	Not applicable
9.2 Other information	
9.2.1 Information with regard to physical hazard classe	
a) Explosives	Not explosive
b) Flammable gases	Not flammable gas
c) Oxidising gases	Not oxidizer
d) Gases under pressure	Gases under pressure: Refrigerated liquefied gas
9.2.2 Other safety characteristics	
a) Conductivity	0,02598 W/(m K)
b) Critical temperature	-146.9°C
c) Critical preassure	34 bar

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2 Chemical stability
Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.3 Possibility of hazardous reactions
There are no known hazardous reactions.

10.4 Conditions to avoid
High temperatures and confined spaces.

10.5 Incompatible materials
Under certain conditions, the nitrogen may be reacted with lithium, titanium (over 800ºS) and magnesium to form nitrides. At high temperatures can also react with oxygen and hydrogen.

10.6 Hazardous decomposition products - None

SECTION 11: TOXICOLOGICAL INFORMATION	
11.1 Information on hazard classes as defined in Regulation (EC) №1272/2008	
Acute toxicity	Based on available data, the classification criteria are not met
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met
Mutagenicity	Based on available data, the classification criteria are not met
Carcinogenicity	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT - single exposure	Based on available data, the classification criteria are not met
STOT - repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met Note: At high concentrations may cause suffocation due to lack of oxygen
11.2 Information on other hazards	
11.2.1 Endocrine disrupting properties - data lacking	
◘ **V7** 11.2.2 Other information - data lacking◘	

SECTION 12: ECOLOGICAL INFORMATION	
12.1 Toxicity Nitrogen is not toxic and does not pollute the soil and water. It is an ingredient of the air.	
12.1 Toxicity	not toxic and does not pollute the soil and aquatic environment.
12.2 Persistence and degradability	No ecological damages causes by this product
12.2 Bioaccumulative potential	The product does not show any bioaccumulation properties.
12.4 Mobility in soil	Unlikely to cause pollution due to its high volatility
12.5 Results of PBT and vPvB assessment	No data available
12.6 Endocrine disrupting properties	
12.7 Other adverse effects	Not known effects from this product
◘ **V7** 12.8 Additional information **-**	Data lacking◘

SECTION 13: DISPOSAL CONSIDERATIONS	
Waste treatment methods:	Do not discharge into any place where its accumulation could be dangerous.

Package waste disposal:	Bring back the bottle to the supplier, as comply with the residual pressure of 0.05 MPa.

SECTION 14: TRANSPORT INFORMATION

14.1 UN No.
ADR/RID - 1066

14.2 UN proper shipping name -
ADR/RID - NITROGEN,COMPESSED
14.3 Transport hazard class(es) - 2

14.4 Packing group:
ADR/RID - not applicable

Labelling ADR/RID

2.2: Non flammable, non toxic gas

Hazard identification number:
ADR/RID - 20

Classification code
ADR/RID : - 1A

14.5 Environmental hazards - none

14.6 Special precautions for users
The person transporting the product must be trained and know how to respond to an accident.
Avoid transport on vehicles where the load area is not separated from that of the driver. He should be familiar to the potential hazard of the cargo and how to react in case of an accident. Before transportation make sure bottles are secured.
V7 14.7 Maritime transport in bulk
according to IMO instruments - not applicable

SECTION 15: REGULATORY INFORMATION

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

EU regulations	Regulation EC 1907/2006 (REACH), Regulation EC 1272/2008 (CLP) * Regulations / legislation and amendments to the date of issue of the document are indicated
15.2 Chemical Safety Assessment	Does not required for this product

16. OTHER INFORMATION

Indication of changes: Changes of the last version are highlighted with ◘ **V7...**◘ . This version replaces all previous versions.

The information above is on the basis of our knowledge about the product and represents the data currently available to us t the moment of safety data sheet issue. This document is intended as guidance for the appropriate precautionary handling with the product by a properly trained person using this product, and does not legally bind in no way manufacturer with guarantee for specific properties, qualities and applications.
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