Bushehr Petrochemical Company
Safety Data Sheets

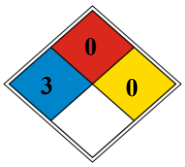
Section 1: Identification

Product Name: Nitrogen
Chemical Name/Synonyms: Nitrogen Liquide, Nitrogen GAS
CAS-No: 7727-37-9
Company: BUPC (Bushehr Petrochemical Company)

Section 2: Hazard(s) Identification

2.1 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):
H280 (73.11%): Contains gas under pressure; may explode if heated [Warning Gases under pressure]
H281 (27.85%): Contains refrigerated gas; may cause cryogenic burns or injury [Warning Gases under pressure]
2.2 Precautionary Statement Codes:
P282, P336+P317, P403, and P410+P403
The corresponding statement to each P-code can be found at the GHS Classification.
2.3 GHS Label Elements Labelling:

2.4 Hazard Diamond:
Health :3
Flammability:0
Physical Hazard:0
Specefic Hazard : -



2.5 Other Hazards:

Section 3: Composition/information on ingredients

3.1 Substance
Formula : N2
Molar Mass : 28.014 g/mol
3.2 Mixture
Not Applicable.

Section 4: First-Aid Measures

4 Description of First Aid Measures
4.1 After Inhalation :
Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
4.2 In case of Skin contact :
ON FROSTBITE: rinse with plenty of water, do NOT remove clothes. Refer for medical attention .
4.3 After Eye contact:
First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.
4.4 After Swallowing:
Not Applicable.

Section 5: Fire-Fighting Measures

5.1 Extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture:
These products include: Carbon monoxide and carbon dioxide
5.3 Advice for firefighters:
Wear self-contained breathing apparatus for firefighting if necessary.
5.4 Other data
Stable under recommended storage conditions.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not touch or walk through spilled material.
Stop leak if you can do it without risk.
Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material.
Do not direct water at spill or source of leak.
If possible, turn leaking containers so that gas escapes rather than liquid.
Prevent entry into waterways, sewers, basements or confined areas.
Allow substance to evaporate.
Ventilate the area.

On loss of containment this substance can cause suffocation by lowering the oxygen content of the air in confined areas.

6.2 Environmental precautions

Not Applicable.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7: Handling and storage

7.1 Precautions for safe handling

Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Open and handle container with care.Use explosion-proof equipment.Keep away from sources of ignition - No smoking.Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Fireproof if in building. Cool. Keep in a well-ventilated room.
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage temperature for liquid nitrogen: -320 °F.

Section 8: Exposure Controls/Personal Protection

8.1 Exposure parameters

Chemical Name	TLV	Celling	TWA	STEL	IDLH
Nitrogen	Simple asphyxiant.	*	*	*	*

8.2 General protective and hygienic measures:

Structural firefighters' protective clothing provides thermal protection but only limited chemical protection.
Always wear thermal protective clothing when handling refrigerated/cryogenic liquids or solids.

8.3 Breathing equipment:

Wear positive pressure self-contained breathing apparatus (SCBA).

8.4 Protection of hands:

insulated gloves; long sleeves; trousers worn outside boots or over high-top shoes to shed spilled liquid.

8.5 Eye protection:

Safety glasses or face shield.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Form: Liquid
Odor: Odorless
Odor threshold: No data available.
PH: No data available.
Melting point/melting range: -210 °C
Boiling point/boiling range: -196 °C
Flash point: N.A
Evaporation rate: No data available.

Flammability: Nonflammable Liquid.
Upper flammability or explosive limits: N.A
lower flammability or explosive limits: N.A
Autoignition temperature: 450 °C
Danger of explosion: N.A
Vapor pressure:13,096 hPa (9,823 mmHg) at 37.7 °C (99.9 °F)
Vapor density: 0.96737 (Air = 1.00)
Relative density:(air = 1): 0.97
Solubility in/Miscibility with water: Slightly soluble in water and alcohol.
9.2 Other data

Section 10: Stability and Reactivity

10.1 Reactivity:
Incombustible and unreactive.
10.2 Chemical stability:
Stable under recommended storage conditions.
10.3 Conditions to avoid:
These substances undergo no chemical reactions under any known circumstances except those under extreme conditions (liquid nitrogen reacts violently in mixture with magnesium powder when a fuse is lit. Due to formation of magnesium nitride). Otherwise, they are nonflammable, noncombustible and nontoxic. They can asphyxiate.

10.4 Incompatible materials:
Nitrigen is incompatible with strong oxidizing agents.
10.5 Hazardous decomposition products:
Nitrogen oxides.

Section 11: Toxicological Information

11.1 Information on toxicological effects
Acute toxicity:
Toxic in contact with skin. Toxic if inhaled. Danger through skin absorption.
Skin: Frostbite.
Eye: Pain. Severe deep burns, Frostbite.
Inhalation: Unconsciousness. Weakness. Suffocation.
Ingestion: No data available.
Carcinogenic effects: No data available.
Reproductive toxicity: No data available.
Target organs: Skin
11.2 Further information:
Other Poison - Simple Asphyxiant

Section 12: Ecological Information

12.1 Toxicity
No data available.
12.2 Persistence and degradability
No data available.
12.3 Bioaccumulative potential
No data available.
12.4 Mobility in soil
Potential mobility in soil.
12.5 Results of PBT and vPvB assessment
Not applicable.
12.6 Other adverse effects

Section 13: Disposal Considerations

Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in air, soil or water; effects on animal, aquatic and plant life; and conformance with environmental and public health regulations. If it is possible or reasonable use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination.

Section 14: Transport Information

14.1 DOT regulations:
UN Number : 1066
Proper Shipping Name: Nitrogen
Class or Division: 2.2
Hazard class:UN Hazard Class: 2.2

Section 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:
Compressed Gas.
15.2 Chemical Safety Assessment
N.A

Section 16: Other Information

Methods of Dissemination:
No data available.
Toxic Combustion Products:
Hazardous decomposition products formed under fire conditions - Carbon oxides.
Other Hazardous Reactions:
The gas is heavier than air when cold and may accumulate in low ceiling spaces causing deficiency of oxygen.