


UN	1066
HAZCHEM	2 
CLASS	2.2

Nitrogen, compressed

T E C H S P E C S

CONTAINER	'G'	'E'	MAXI 4	MAXI 8	PACK 16
CONTENT m ³ (101.325 kPa @ 15° C)	6.8	3.4	50.0	100	109
GAUGE PRESSURE (kPa @ 15° C)	14,700	14,700	approx. 10,000*	approx. 10,000*	14,700
AVERAGE WEIGHT kg (full)	63	32	420	785	1,145
AVERAGE WEIGHT kg (empty)	55	28	355	660	1,020
OUTLET CONNECTION A.S. 2473 Type 10	VERTICAL	VERTICAL	HORIZ.	HORIZ.	HORIZ.

NOTE: The above data is typical of the most common containers.
* denotes the use of a pressure reducing valve.

SPECIFICATION

Nitrogen	> 99.9%
Oxygen & Argon	< 0.1%
Moisture	< 100ppm at full cylinder pressure

PHYSICAL DATA

Chemical Symbol	N ₂
Boiling Point	-195.8°C
Relative Density (Air = 1)	0.967
Molecular Weight	28.013
Critical Temperature	-147.1°C
Flashpoint	Non-flammable
Density of Gas (@101.3 kPa & 15°C)	1.170 kg/m ³
Solubility in Water (@101.3 kPa & 20°C)	0.016
Specific Volume (@101.3 kPa & 15°C)	0.855 m ³ /kg

PROPERTIES

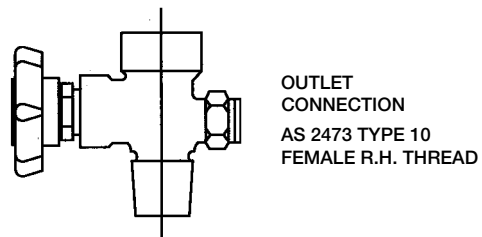
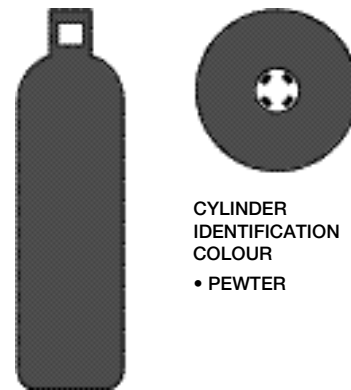
Nitrogen is colourless, odourless and tasteless.
Nitrogen constitutes 78% of the composition of air.
Nitrogen does not support life, it is non toxic.
It is non flammable and will not support combustion.

USES


Due to its inertness with respect to most elements, and the consequent operating safety, nitrogen has valuable uses in many fields.

Inert atmosphere:

- metallurgy: heat treatment (annealing, stress relief), protection of graphite crucibles and dies in the fabrication of copper and its alloys.
- chemicals and petrochemicals: protection of catalysts and reactors.
- gas industry: adjustment of heating value of natural gas, protection of methane tankers.
- food and pharmaceutical industry: storage of fruits and vegetables, packaging of pharmaceuticals and foodstuffs.
- mining industry: fire extinguishing.
- electrical industry: used in mixtures with argon to fill light bulbs.



Nitrogen, compressed

UN	1066
HAZCHEM	2 
CLASS	2.2

T E C H S P E C S

H A N D L I N G & S A F E T Y

USES Continued

Degassing and inert mixing fluid:

- metallurgy:degassing of molten aluminium baths.
- food industry:degassing of liquids.

Purge and inert transfer fluid:

- chemicals,petrochemicals and gas industry:
purging and drying of piping,catalyst regeneration,
methane tanker purging.
- electrical engineering: purging of shutdown a.c.
generators.
- electronics industry.

HAZARDS

Should nitrogen replace oxygen in air there is a risk of asphyxia: air containing less than 16% oxygen is dangerous.

CYLINDER STORAGE AND HANDLING

Store cylinders upright in a cool, well ventilated area away from sources of heat and combustible materials.

Protect cylinders, particularly the valve, against physical damage whether full or empty.

Do not artificially heat cylinder. Keep away from artificial heat.

Do not allow any part of the cylinder to be exposed to temperatures above 55°C.

Check that cylinders are clearly labelled.

Keep outlet seals in place on full cylinders.

Close valves on empty cylinders.

LEAKING CYLINDERS

Move to a well ventilated area.

Stop leak if possible to do so.

Evacuate area way from direction of movement of gas.

If leak cannot be stopped,move cylinder to a safe area and allow to empty.

MATERIALS COMPATIBILITY

Nitrogen is non-corrosive and so any common metal is acceptable, provided equipment is designed to withstand process pressure.

PRECAUTIONS IN USE

Never allow oil or grease on cylinder or valve.

Close cylinder valve when not in use.

Always use regulator to connect to system.

Secure cylinders to prevent falling over.

Open cylinder valve slowly.

PERSONAL PROTECTION

Personnel regularly engaged in the use and movement of gas cylinders must be provided with:

- Safety footwear
- Leather or PVC gloves

Full cover overalls & safety glasses are recommended.

FIRE

Nitrogen will not support combustion.

Remove cylinders not directly affected by fire.

Cool cylinders with water from a protected location.

If unable to keep cylinders cool, evacuate area.

FIRST AID

If victim is conscious:

- Move to uncontaminated area to breathe fresh air.
- Keep warm and quiet.
- Call doctor.

If victim is unconscious:

- Move to uncontaminated area and give assisted respiration.
- When breathing is restored, treatment as above. Continued treatment should be symptomatic and supportive.

ADDITIONAL INFORMATION

The information, recommendations and data contained in this publication are intended to give basic guidance to users of Air Liquide gases for their safe handling and use.

Material Safety Data Sheets (MSDS) for gases and gas mixtures supplied by Air Liquide are also available.

It is essential for the safe use of gases that personnel are properly trained and are fully aware of the possible hazards.

Further information and advice on any matter relating to the safe handling or use of these products may be obtained from the nearest Air Liquide office.