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Know Your Liquid Nitrogen (LN_2)

What is LN_2?

LN_2 is colourless, odourless & tasteless. Nitrogen is the same gas that comprises 78% of the air, compressed to a liquid which has a temperature of -196°C.

Asphyxiation Hazard

If LN_2 is spilt the liquid would boil off to give 683 times its original volume, this would displace the oxygen in the surrounding air. Never attempt an unprotected rescue.

Recommended Personal Protective Equipment

Eye/face to EN 166
Gloves to EN 511
Apron to EN 340
Safety shoes

Keep Away From Ignition Sources

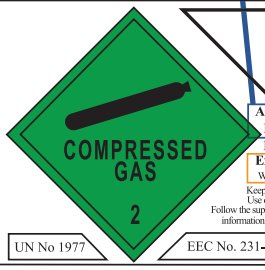
LN_2 is so cold that it can start to liquefy the oxygen from the surrounding air forming an enriched oxygen atmosphere which supports combustion.

Make sure your dewar/vessel is labelled

NITROGEN

Gas Supplier:
Gas Supplier Address:

Gas Supplier contact telephone number:



Nitrogen
-N2
(refrigerated liquid)

Asphyxiant in high concentrations.
Heavier than air. No odour.
Do not breathe the gas.
Extremely cold- may cause frost bite
Wear suitable gloves and eye /face protection.

Keep and use container in a well ventilated place.
Use only equipment suitable for nitrogen gas.
Follow the suppliers operations instructions. For further safety information see "Industrial Gases Data and Safety Sheet"

UN No 1977

EEC No. 231-783-9

DEWAR

Nominal Capacity

Litres

IMPORTANT INFORMATION

WARNING

- This vessel contains a cryogenic liquid at -196 deg. C
- Split Nitrogen can result in cold 'burns' and a reduction of the oxygen content of the atmosphere nearby.
- Liquid Nitrogen vaporises rapidly to nearly 683 times its liquid volume.
- Only authorised personnel should handle this vessel and its contents.

CONTACT 'Gas Company' AT ONCE IF YOU THINK YOU HAVE A PROBLEM

DO

Keep the vessel upright and clear from obstructions.
Site in a safe area to prevent damage.
Ensure adequate ventilation at all times.
Where a liquid withdrawal device is fitted check connections for leaks.
Use only the manufacturer's recommended methods to move cylinders.
Wear Personal Protective Equipment.
Where a liquid withdrawal device is fitted ensure all valves are closed securely when the vessel is not in use.
Seek immediate medical assistance in the event of direct contact with cold liquid.

DO NOT

Tamper with safety relief devices
Carry out any repairs or modifications to any part of the vessel.
Fit liquid withdrawal devices to vessels which are not marked as suitable for such devices.
Operate withdrawal devices above .05 bar.
Allow oil or grease to come into contact with the vessel or withdrawal device.
Permit direct flame or heating devices near the vessel.
Transfer liquid into vessels other than those constructed for the purpose.
Enter vapour clouds.
Take risks.

MAINTENANCE -

Telephone this number to arrange emergency maintenance. Charges will be made for items which are not the responsibility of 'gas company'.

REFILL -

Telephone this number to arrange additional deliveries with 'gas company' outside your pre-arranged schedule supply.

The use of this vessel and the critical parts of its operation and maintenance should be fully understood by the user.

Refer to the manufacturers literature for liquid withdrawal device valves and safety valves information.

Storage

Risk asess for the requirement of oxygen monitors. Separate from all gas types in a well-ventilated area protected from excessive heat.

Emergency Actions

All in contact with LN_2 should know emergency procedures which should be documented and regularly practiced.

Relief Valves are Vital

LN_2 boils off to a gas, pressure build up could prompt an explosion. Never use unauthorised sealed containers to carry or store LN_2.

What is the Law?

Any employee coming into contact with a potentially dangerous substance SHALL be trained in its safe operation & behaviour.