# Medical Pharmaceutical

## Liquefied Nitrous Oxide

### Nitrous Oxide:

Nitrogen oxide is a cryogenic gas with multiple applications both in the food industry, as a propellant, and in healthcare due to its anesthetic effect.
Due to being an oxidizing gas with a narcotic effect, it must be used with caution. This gas has a low critical temperature and high pressure when packaged. It is liquefied at cryogenic temperature for the storage and transport of large volumes.

| Chemical Name: | CAS Number: |
| --- | --- |
| Nitrous oxide | 10094-27-91 |

### Technical Characteristics:

> Cryogenic gas
> Gas packaged in high-pressure containers with gas-phase valve
> Characteristic smell
> Narcotic effect
> Soluble with fats and suitable for the food industry

### Packaging:

- Cylinder
- Cylinder blocks
- Container - Tank

### Applications:

Propellant in food (spray cream or siphon to make foam)

Anesthetic gas

Combustible

## Table of Properties:

| | | |
|---|---|---|
| Molecular Weight | 28.05 | g/mol |
| Boiling point | -88.47 | °C |
| Latent heat of vaporization at boiling point | 374.286 | kJ/kg |
| Liquid density at boiling point | 1230.458 | kg/m3 |
| Cp (specific heat at constant pressure) | 8.73E-01 | kJ/kg K |
| Cv (specific heat at constant volume) | 6.80E-01 | kJ/kg K |
| Specific Gravity | 1.53 | |
| Thermal conductivity | 19.099 | mW/m.K |
| Solubility in water | 5.932E-4 | mol/mol |
| Steam pressure | 45.92 | bar |

## Material Compatibility:

| **Metals** | |
|---|---|
| Aluminum | Satisfactory |
| Brass | Satisfactory |
| Monel | Satisfactory |
| Copper | Satisfactory |
| Ferritic steel | Satisfactory |
| Stainless steel | Satisfactory |
| Zinc | Satisfactory |
| Titanium | No data |

| **Plastics** | |
|---|---|
| Polytetrafluoroethylene | Satisfactory |
| Polychlorotrifluoroethylene | Satisfactory |
| Polyvinylidene fluoride | Satisfactory |
| Polyvinyl chloride | Satisfactory |
| Ethylene tetrafluoroethylene | Satisfactory |
| Polycarbonate | No data |
| Polyamide | Satisfactory |
| Polypropylene | Satisfactory |

| Elastomers | |
|---|---|
| Butyl (isobutene-isoprene) rubber | Not recommended |
| Nitrile rubber NBR | Not recommended |
| Chloroprene | Not recommended |
| Chlorofluorocarbon | Not recommended |
| Silicone | Satisfactory |
| Perfluoroelastomers | No data |
| Fluoroelastomers | Satisfactory |
| Neoprene | Satisfactory |
| Polyurethane | Satisfactory |
| Ethylene-Propylene | Not recommended |

| Lubricants | |
|---|---|
| Mineral | Not recommended |
| Fluorocarbon base | Satisfactory |

## More Information:

If you want more information about our products, contact us.

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