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## ENTONOX<sup>®</sup> Medical Mixture E.P. Analgesic agent

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Medical mixture of 50% N<sub>2</sub>O E.P. & 50% O<sub>2</sub> E.P.

Entonox is an oxidising medical gas mixture of nominally 50% Nitrous Oxide and 50% Oxygen. Entonox is a sweet smelling colourless gas. Due to a low solubility in blood and tissues the metabolism of Nitrous Oxide is minimal. Entonox is a Schedule 4 drug for Therapeutic use. Nitrous Oxide is an asphyxiant in the absence of Oxygen. It is supplied as a gas mixture at high pressure in metal cylinders. It vigorously supports combustion of many materials which will not normally burn in air.

**Uses** Nitrous Oxide is widely used as a base anaesthetic generally supplemented with either potent volatile or intravenous anaesthetic agents. These supplements are required in approximately half of their normal anaesthetising dose because of the anaesthetic effect of the Nitrous Oxide. It is used extensively for relative analgesia and as a freezing agent in cryosurgery.



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**Indications** Entonox is indicated in adults and children for analgesia.

**Contraindications**

- Hypersensitivity to Nitrous Oxide or any other component in the gas
- Nitrous Oxide should not be used where air is entrapped within a body
- Nitrous Oxide should not be used on intoxicated or heavily sedated patients
- Where there is prolonged exposure, monitoring of peripheral blood for features of megaloblastic anaemia and leucopenia is recommended

**Precautions**

- Entonox cylinders must be stored above 0°C. At temperatures below -5°C the Nitrous Oxide component may separate. Should this occur, the cylinder should be placed in a warm room (above 15°C) for at least 2 hours, then rolled horizontally for at least 5 minutes to remix the components
- Nitrous Oxide is a simple asphyxiant in the absence of Oxygen. Classified as hazardous according to the criteria of Worksafe Australia
- Worksafe exposure standard TLV-TWA is 25 ppm as an 8 hour time weighted average
- Scavenging of waste Entonox gas should be used to maintain levels to below the 25 ppm exposure limit of Nitrous Oxide
- Care should be taken with long term usage of Entonox

**Dosage and Administration** Entonox is self administered and inhaled via a demand valve through a face mask or mouthpiece. The gas is breathed in by the patient and absorbed through the lungs. It should only be administered by medical personnel trained in the appropriate techniques and in an adequate environment. Cylinders should only be used in conjunction with special Entonox gas pressure regulators and demand valves.

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**Classifications** 3156 [UN NUMBER](#) 2.2, 5.1 [CLASS](#) 042 [AUST. MSDS](#) 088 [N.Z. MSDS](#)

**ENTONOX – Medical Mixture E.P. (AUSTR 34470)**

**AUST. Specifications**

**Component (nominal)**

Nitrous Oxide	50 ± 2%
Oxygen	Balance

**Impurities (max)**

Carbon Dioxide	< 300 ppm
Carbon Monoxide	< 5 ppm
Nitrogen Oxides	< 2 ppm
Moisture	< 67 ppm

**AUST. Order Codes**

<b>Cylinders</b>	Contents (Litres)	Gauge Pressure kPa (g) at 15°C
570C	500	12,000
570D	1,600	12,000
570E	4,000	12,000

**Cylinder Outlets**

AS 2473.3 Fig. 8 Pin Index

**ENTONOX – Medical Mixture E.P. (TT50-4101)**

**N.Z. Specifications**

**Component (nominal)**

Nitrous Oxide	50 ± 2%
Oxygen	50 ± 2%

**Impurities (max)**

Carbon Dioxide	< 300 ppm
Carbon Monoxide	< 5 ppm
Nitrogen Oxides	< 2 ppm
Moisture	< 67 ppm

**N.Z. Order Codes**

<b>Cylinders</b>	Contents (m <sup>3</sup> )	Gauge Pressure kPa (g) at 15°C
182A	0.45	12,500
182E	2.64	12,500
182G	8.86	12,500

**Cylinder Outlets**

AS 2473.3 Fig. 8 Pin Index

**Equipment**

Description	Inlet Fitting	Part Number AUST	Part Number NZ
BPR Medical Entonox Pressure Regulator – AS Outlet Fitting	Pin Index	819-0073	819-0073
BPR Medical Entonox Pressure Regulator – BS Outlet Fitting	Pin Index	–	819-0081
BPR Medical Entonox Demand Valve & Hose – 2mtr	AS Fitting	828-7002	828-7002
BPR Medical Entonox Demand Valve & Hose – 2mtr	BS Fitting	–	828-0013
BPR Medical Exhalation Valve with Mouthpiece – PK 10	–	828-0045	828-0045
BPR Medical Exhalation Valve with Mouthpiece – Box 100	–	828-0002	828-0002
BPR Medical Exhalation Valve for use with Facemask – PK 10	–	828-0044	828-0044
BPR Medical Exhalation Valve for use with Facemask – Box 100	–	828-0042	828-0042
Intersurgical Facemask – Box 40	–	828-0046	828-0046

Some parts are not available in Australia.

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