

- **AErrane** (Baxter Healthcare Ltd)
Isoflurane 1 ml per 1 ml AErrane volatile liquid | 250 ml PoM ⓧ
(Hospital only)

Nitrous oxide

10-Mar-2020

● INDICATIONS AND DOSE

Maintenance of anaesthesia in conjunction with other anaesthetic agents

▶ BY INHALATION

- ▶ Neonate: 50–66 %, to be administered using suitable anaesthetic apparatus in oxygen.
- ▶ Child: 50–66 %, to be administered using suitable anaesthetic apparatus in oxygen

Analgesia

▶ BY INHALATION

- ▶ Neonate: Up to 50 %, to be administered using suitable anaesthetic apparatus in oxygen, adjusted according to the patient's needs.
- ▶ Child: Up to 50 %, to be administered using suitable anaesthetic apparatus in oxygen, adjusted according to the patient's needs

IMPORTANT SAFETY INFORMATION

Nitrous oxide should only be administered by, or under the direct supervision of, personnel experienced in its use, with adequate training in anaesthesia and airway management, and when resuscitation equipment is available.

- **CAUTIONS** Entrapped air following recent underwater dive · pneumothorax · presence of intracranial air after head injury · recent intra-ocular gas injection
- CAUTIONS, FURTHER INFORMATION** Nitrous oxide may have a deleterious effect if used in patients with an air-containing closed space since nitrous oxide diffuses into such a space with a resulting increase in pressure. This effect may be dangerous in conditions such as pneumothorax, which may enlarge to compromise respiration, or in the presence of intracranial air after head injury, entrapped air following recent underwater dive, or recent intra-ocular gas injection.
- **INTERACTIONS** → Appendix 1: nitrous oxide
- **SIDE-EFFECTS** Abdominal distension · addiction · agranulocytosis · disorientation · dizziness · euphoric mood · megaloblastic anaemia · middle ear damage · myeloneuropathy · nausea · paraesthesia · sedation · subacute combined cord degeneration · tympanic membrane perforation · vomiting
- SIDE-EFFECTS, FURTHER INFORMATION** Exposure of patients to nitrous oxide for prolonged periods, either by continuous or by intermittent administration, may result in megaloblastic anaemia owing to interference with the action of vitamin B₁₂; neurological toxic effects can occur without preceding overt haematological changes. Depression of white cell formation may also occur.
- **PREGNANCY** May depress neonatal respiration if used during delivery.
- **BREAST FEEDING** Breast-feeding can be resumed as soon as mother has recovered sufficiently from anaesthesia.
- **MONITORING REQUIREMENTS**
 - ▶ Assessment of plasma-vitamin B₁₂ concentration should be considered in those at risk of deficiency, including the elderly, those who have a poor, vegetarian, or vegan diet, and those with a history of anaemia.

- ▶ Nitrous oxide should **not** be given continuously for longer than 24 hours or more frequently than every 4 days without close supervision and haematological monitoring.
- **DIRECTIONS FOR ADMINISTRATION** For analgesia (without loss of consciousness), a mixture of nitrous oxide and oxygen containing 50% of each gas (*Entonox*[®], *Equanox*[®]) is used.
- **HANDLING AND STORAGE** Exposure of theatre staff to nitrous oxide should be minimised (risk of serious side-effects).
- **PATIENT AND CARER ADVICE**
Medicines for Children leaflet: Nitrous oxide for pain
www.medicinesforchildren.org.uk/nitrous-oxide-pain

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Inhalation gas

▶ Nitrous oxide (Non-proprietary)

Nitrous oxide 1 ml per 1 ml Nitrous oxide cylinders size E |

- 1800 litre P ⓧ
- Medical Nitrous Oxide cylinders size D | 900 litre P ⓧ
- Medical Nitrous Oxide cylinders size G | 9000 litre P ⓧ
- Nitrous oxide cylinders size F | 3600 litre P ⓧ
- Nitrous oxide cylinders size J | 18000 litre P ⓧ
- Nitrous oxide cylinders size G | 9000 litre P ⓧ
- Medical Nitrous Oxide cylinders size F | 3600 litre P ⓧ
- Nitrous oxide cylinders size D | 900 litre P ⓧ
- Medical Nitrous Oxide cylinders size E | 1800 litre P ⓧ

P 865

Sevoflurane

● INDICATIONS AND DOSE

Induction of anaesthesia (in oxygen or nitrous oxide-oxygen)

▶ BY INHALATION

- ▶ Neonate: Up to 4 %, adjusted according to response, to be administered using specifically calibrated vapouriser.
- ▶ Child: Initially 0.5–1 %, then increased to up to 8 %, increased gradually, according to response, to be administered using specifically calibrated vapouriser

Maintenance of anaesthesia (in oxygen or nitrous oxide-oxygen)

▶ BY INHALATION

- ▶ Neonate: 0.5–2 %, adjusted according to response, to be administered using specifically calibrated vapouriser.
- ▶ Child: 0.5–3 %, adjusted according to response, to be administered using specifically calibrated vapouriser

- **CAUTIONS** Susceptibility to QT-interval prolongation
- **INTERACTIONS** → Appendix 1: volatile halogenated anaesthetics
- **SIDE-EFFECTS**
 - ▶ **Common or very common** Drowsiness · fever · hypothermia
 - ▶ **Uncommon** Asthma · atrioventricular block · confusion
 - ▶ **Frequency not known** Dystonia · intracranial pressure increased · muscle rigidity · nephritis tubulointerstitial · oedema · pancreatitis
- **PREGNANCY** May depress neonatal respiration if used during delivery.
- **BREAST FEEDING** Breast-feeding can be resumed as soon as mother has recovered sufficiently from anaesthesia.
- **RENAL IMPAIRMENT** Use with caution.
- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Inhalation vapour

▶ Sevoflurane (Non-proprietary)

- Sevoflurane 1 ml per 1 ml Sevoflurane volatile liquid | 250 ml PoM £123.00 (Hospital only)