NHS Lothian Safe Use of Medicines Policy & Procedures – January 2018

28.11 Appendix 1 - Classification of gas cylinders

Gas cylinders are classified into two main categories - medical and non-medical cylinders. These two categories must never be mixed, either in storage or in use. Gas cylinders are further subdivided into four groups depending on the risk associated with the cylinder contents. Medical gas cylinders present hazards due to a.) the nature of the contents and b.) the fact that the contents are susceptible to mechanical or heat related damage.

- Group 1 Flammable
- Group 2 Oxidising (and/or supports combustion)
- Group 3 Toxic or Corrosive (contents may also be flammable or oxidising)
- Group 4 Others (including inert gases)

The majority of medical gas cylinders used fall into group 2 with helium and carbon dioxide classified in group 4. Gases other than oxygen are considered to pose a hazard in an enclosed environment where they may replace air.

Medical gas cylinders available through Pharmacy

Medical Oxygen (compressed) Medical Nitrous Oxide 50% Oxygen/50% Nitrous Oxide Medical Gas Mixture (Equanox®) Medical Air Medical Carbon Dioxide Medical Helium Nitric oxide 5% Carbon Dioxide/Oxvgen Medical Gas Mixture 21% Oxygen/Helium Medical Gas Mixture * 10% Carbon Dioxide/Oxygen Medical Gas Mixture * 20% Carbon Dioxide/Oxygen Medical Gas Mixture * 5% Carbon Dioxide/Oxygen Medical Gas Mixture * 9% Helium/35% Oxygen/Nitrogen Medical Gas Mixture * Lung Function Medical Gas Mixture 1 (0.28% Carbon Monoxide/14% Helium/18% Oxygen/Nitrogen Mixture * Lung Function Medical Gas Mixture 2 (0.30% Carbon Monoxide/10% Helium/18.8% Oxygen/Nitrogen Mixture * Lung Function Medical Gas Mixture 3 (0.28% Carbon Monoxide/9% Helium/19% Oxygen/Nitrogen Mixture

- * Lung Function Medical Gas Mixture 4 (0.30% Carbon Monoxide/10% Helium/21% Oxygen/Nitrogen Mixture
- * Available from BOC special gases, via the Pharmacy Department.