

Guidelines for Using Helium

Helium (He) is a colorless, odorless, and tasteless noble gas. Helium has atomic number of 2 and atomic weight of 4. Helium was formerly used as diluent for other gases such as oxygen for the treatment of certain respiratory obstruction cases.

Health and Safety Hazards

Helium is considered hazardous by OSHA 29 CFR 1910.1200 (Hazard Communication Standard).

Fire Hazard: Helium is non-combustible. However, exposure to heat or fire can lead to increase in pressure which will cause it to rupture.

Skin Hazard: Helium can cause frostbite when in contact with liquid. If liquefied and in contact with very cold water it can cause violent boiling.

Eye Hazard: If in contact with liquid Helium can cause frostbite.

Inhalation Hazard: Inhalation of Helium can cause dizziness, lethargy, headaches and may displace oxygen leading to suffocation.

First Aid/Fire and Accidental Release Measures

Hazards	First Aid Measure
Inhalation	Immediately remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, call a physician. Qualified personnel may give oxygen.
Skin contact	Adverse effects not expected.
Eye contact	Adverse effects not expected. In case of eye irritation, rinse immediately with a lot of water. If irritation continues, contact an ophthalmologist.
Fire	Use appropriate extinguishing media.
Accidental release	Evacuate area. Wear self-contained breathing apparatus. Stop leakage if environment is safe.

Precautions for Safe Handling and Storage

When moving Helium cylinder, use personal protection equipment. Wear leather safety gloves and cover shoes. Use cart or trolley to move cylinder. Store gas in a cool, well-

ventilated place. Temperature should not exceed 125 °F. Firmly strap cylinder to secure it to a wall or a stable place. Close container valves after each use and when cylinder is empty.

Waste Disposal Method

Dispose cylinder in accordance with appropriate regulations. The supplier can also assist in disposing the cylinder or its contents.

Resources

Praxair: Safety Data Sheets.

PubChem <http://pubchem.ncbi.nlm.nih.gov>.

OSHA <http://www.osha.gov>.