

HELIUM

He

CAS Number : [7440-59-7]

UN1046 (gas); UN1963 (liquid refrigerated)

Batch: 323

1	Molecular Weight	Molecular weight : 4.0026 g/mol
2	Solid phase	Melting point (under 26 atm) : -272.2 °C
3	Liquid phase	Liquid density (1.013 bar at boiling point) : 124.96 kg/m ³ Liquid/gas equivalent (1.013 bar and 15 °C (59 °F)) : 748 vol/vol Boiling point (1.013 bar) : -269 °C Latent heat of vaporization (1.013 bar at boiling point) : 20.3 kJ/kg
4	Critical point:	Critical temperature : -268 °C Critical pressure : 2.275 bar Critical density : 69.64 kg/m ³
5	Gaseous phase	Gas density (1.013 bar at boiling point) : 16.891 kg/m ³ Gas density (1.013 bar and 15 °C (59 °F)) : 0.169 kg/m ³ Compressibility Factor (Z) (1.013 bar and 15 °C (59 °F)) : 1.0005 Specific gravity (air = 1) (1.013 bar and 21 °C (70 °F)) : 0.138 Specific volume (1.013 bar and 21 °C (70 °F)) : 6.037 m ³ /kg Heat capacity at constant pressure (Cp) (1 bar and 25 °C (77 °F)) : 0.02 kJ/(mol.K) Heat capacity at constant volume (Cv) (1 bar and 25 °C (77 °F)) : 0.012 kJ/(mol.K) Ratio of specific heats (Gamma:Cp/Cv) (1 bar and 25 °C (77 °F)) : 1.664 Viscosity (1.013 bar and 0 °C (32 °F)) : 0.0001863 Poise Thermal conductivity (1.013 bar and 0 °C (32 °F)) : 142.64 mW/(m.K)
6	Miscellaneous	Solubility in water (20 °C and 1 bar) : 0.0089 vol/vol Solubility in water (1.013 bar and 0 °C (32 °F)) : 0.0537 vol/vol Concentration in air : 0.934 vol %

Use: Helium is abundant in the Sun's atmosphere and is found at trace level in the Earth's atmosphere. The name helium comes from the Greek ἥλιος (helios) meaning "the Sun". However, it may also be found in fossil form in natural gas pockets in some oil fields, where it is extracted by drilling deep into the subsoil of certain regions in the U.S.A., Algeria and Poland. Helium is an extremely light gas (its density is 0.169 kg/m³) and is therefore very volatile. It is colorless, odorless, non-flammable and completely inert. It cannot sustain life..

Transportation:

The product is shipped by rail in special railway tank-cars, covered railway-cars, and multipurpose containers, as well as by road transport in special tank-trucks and steel cylinders in accordance with the shipping rules for the corresponding kind of transport.