

Cosutin Industrial CO., Limited

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Isopentane

GENERAL DESCRIPTION

Isopentanes are some of the primary blowing agents used in the production of polystyrene foam and other foams. Usually, a mixture of n-, i-, and increasingly cyclopentane is used for this purpose. Because of its low boiling point, low cost, and relative safety, pentane is used as a working medium in geothermal power stations. It is added into some refrigerant blends as well.

Isopentanes are relatively inexpensive and are the most volatile alkanes that are liquid at room temperature, so they are often used in the laboratory as solvents that can be conveniently evaporated. Pentanes are miscible with most common nonpolar solvents such as chlorocarbons, aromatics, and ethers. They are also often used in liquid chromatography.

Isopentane is also used in a closed loop in geothermal power production to drive turbines. Isopentane is used, in conjunction with dry ice or liquid nitrogen, to freeze tissues for cryosectioning in histology.

SPECIFICATIONS

Appearance :	Colourless and not turbid
Color-saybolt	+30min
Iso-Pentane wt%	≥95%
N-Pentane	balance
Butanes and lighters %	≤0.5
Hexanes and heavier%	≤0.5
Total Oleffines, PPM	≤20
Total Sulphur, ppm	<1
Benzene, PPM	<1
Bromine index, PPM	<10
Non volatile matter, mg/100ml	<0.5
Specific Gravity g/cm ³	0.61-0.65
Water, PPM	≤20

PROPERTIES

Isopentane

CAS Number: 78-78-4

Appearance Colorless transparent liquid

Odor Odorless

Melting point/freezing point -159.89°C

Initial boiling point and boiling range 27.8-28.2°C

Flash point -51.0°C

Evaporation rate 13 BuAc=1

Flammability (solid, gas) HIGHLY FLAMMABLE

Upper/lower flammability or explosive limits Upper 8.3%; Lower 1.32%

Vapour pressure 79.3 @ 21.1°C

Vapour density 2.48 (AIR=1)

Relative density 0.62 (WATER=1)

Water solubility Immiscible

Autoignition temperature 420°C

Viscosity 0.214 cP (at 20 °C)

Refractive index 1.357

Handling method and safety information

Iso-pentane is a highly flammable alicyclic hydrocarbon. Read the Material Safety

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Data Sheet (MSDS) before use. Dangerous or hazardous reactions do not take place under normal conditions.

Packaging specifications

ISO Tank.