

INEOS Oligomers

1-Hexene (Alpha Olefin C6)

1-Hexene, a clear water-white, mobile liquid, is produced by Ineos Oligomers by using a modified Ziegler ethylene chain growth technology.

Applications

1-Hexene enters into all reactions typical of alpha olefins. It can be used as a comonomer in polyolefins and as an intermediate in the production of oxo alcohols, hexyl mercaptans, organo aluminum compounds, and synthetic fatty acids.

Typical Properties¹

Carbon Number, wt% (by GC)

C ₄ and lighter	<0.1
C ₆	100.0
C ₈ and heavier	<0.1
	100.0

Hydrocarbon Type, wt% (by GC)

Monoolefin	99.9
Paraffin	<0.1
	100.0

Olefin Isomers, wt% by (GC)

Hexene-1	99.1
C ₆ Vinylidene	0.3
C ₆ Linear internal	0.4
3-Methyl-1-pentene	0.1

Other Properties

Color, APHA	5
Water, ppm	<10
Density at 20 °C, g/mL	0.673
Density at 68 °F, lbs/gal	5.62
Flash Point, °C, (ASTM D 56)	- 26
Boiling Range, °C, (5%-95%)	63-64

¹Typical properties will vary within specification limits.

Transportation Mode

1-Hexene is stored and shipped under a nitrogen blanket. It is not corrosive to steel or aluminum. Contact with air or oxygen should be avoided because alpha olefins are sensitive to moisture and auto-oxidation which form impurities that can interface with subsequent reactions. Alpha olefins should be handled under a dry, inert gas atmosphere. As with all hydrocarbons, alpha olefins can form explosive mixtures with air or oxygen in certain concentrations.

1-Hexene is available in rail tank cars, tank trailers, marine vessels and isotanks. 1-Hexene is available in drums on special order.

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