

INEOS Oligomers

1-Decene (Alpha Olefin C10)

1-Decene, a clear water-white, mobile liquid, is produced by Ineos Oligomers by using a modified Ziegler ethylene chain growth technology. The product is 99+% olefinic.

Applications

1-Decene enters into all reactions typical of alpha olefins. It can be used as a comonomer in certain copolymers and as an intermediate in the production of epoxides, amines, oxo alcohols, synthetic lubricants, synthetic fatty acids, and alkylated aromatics.

Typical Properties¹

Carbon Number, wt% (by GC)

C ₈ and lighter	0.2
C ₁₀	99.6
C ₁₂	<u>0.2</u>
	100.0

Hydrocarbon Type, wt% (by GC)

Monoolefin	99.8
Paraffin	<u>0.2</u>
	100.0

Olefin Isomers, mole% by (NMR)

Linear terminal	95.6
Branched terminal	3.3
Linear internal	<u>1.1</u>
	100.0

Other Properties

Color, APHA	5
Density at 20 °C, g/mL	0.741
Density at 68 °F, lbs/gal	6.18
Flash Point, °C, (ASTM D 56)	46
Boiling Range, °C, (5%-95%)	170-171

¹Typical properties will vary within specification limits.

Transportation Mode

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

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