



>>Entry Name: 4-Methyl-1-pentene, 9CI

Synonym(s): Isobutylethylene. 1-Isohexene

CAS Registry Number: 691-37-2

$(\text{H}_3\text{C})_2\text{CHCH}_2\text{CH}=\text{CH}_2$

Molecular Formula: C_6H_{12}

Molecular Weight: 84.161

Accurate Mass: 84.0939

Percentage Composition: C 85.63%; H 14.37%

Source/Synthesis: Manuf. by dimerisation of propene

Use/Importance: Monomer for specialty polyolefins

Melting Point: Mp -154°

Boiling Point: Bp $53.6-53.9^\circ$

Density: d_4^{20} 0.665

Refractive Index: n_D^{20} 1.3825

Other Data: Undergoes Ziegler-Natta polym. to give a highly regular, partially cryst. homopolymer, and cationic polym. to give an amorphous homopolymer of irregular struct.

Hazard & Toxicity: Highly flammable, fl. p. -7° , autoignition temp. 300°

Aldrich: M6740-0

Fluka: 68512

References:

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **1**, 30A, (nmr)

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Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 30A, (ir)

Schmitt, C.G. *et al.*, *J.A.C.S.*, 1932, **54**, 754, (synth)

Markovsov, Yu.A. *et al.*, *Khim. Promst. (Moscow)*, 1971, **47**, 782; *CA*, **76**, 13705c, (manuf)

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Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, MNK250

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