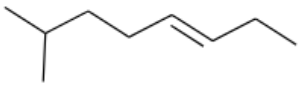
trans-7-Methyl-3-octene

Other names: E-3-Octene, 7-methyl-.
InChI: InChI=1S/C9H18/c1-4-5-6-7-8-9(2)3/h5-6,9H,4,7-8H2,1-3H3/b6-5+
InChI Key: PVWWZQTXWUTHQT-AATRIKPKSA-N
Formula: C9H18
SMILES: CCC=CCCC(C)C
Molecular Weight: 126.24



Physical Properties

Property	Value	Unit	Source
$\Delta_f G°$	102.68	kJ/mol	Joback Method
$\Delta_f H°_{gas}$	-117.15	kJ/mol	Joback Method
$\Delta_{fus} H°$	15.74	kJ/mol	Joback Method
$\Delta_{vap} H°$	35.20	kJ/mol	Joback Method
$logP_{oct/wat}$	3.389		Crippen Method
P_c	2445.89	kPa	Joback Method
T_{boil}	409.04	K	Joback Method
T_c	584.08	K	Joback Method
T_{fus}	171.11	K	Joback Method
V_c	0.513	m^3/kg-mol	Joback Method

Temperature Dependent Properties

Property	Value	Unit	Temperature (K)	Source
$C_{p,gas}$	258.03	J/mol×K	409.04	Joback Method
η	0.0001934	Pa×s	409.04	Joback Method

Sources

Joback Method: https://en.wikipedia.org/wiki/Joback_method
NIST Webbook: http://webbook.nist.gov/cgi/inchi/InChI=1S/C9H18/c1-4-5-6-7-8-9(2)3/h5-6,9H,4,7-8H2,1-3H3/b6-5+
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

$\mathbf{C_{p,gas}}$: Ideal gas heat capacity (J/mol×K).
η: Dynamic viscosity (Pa×s).
$\Delta_f\mathbf{G°}$: Standard Gibbs free energy of formation (kJ/mol).
$\Delta_f\mathbf{H°_{gas}}$: Enthalpy of formation at standard conditions (kJ/mol).
$\Delta_{fus}\mathbf{H°}$: Enthalpy of fusion at standard conditions (kJ/mol).
$\Delta_{vap}\mathbf{H°}$: Enthalpy of vaporization at standard conditions (kJ/mol).
$\boldsymbol{log}\mathbf{P_{oct/wat}}$: Octanol/Water partition coefficient .
$\mathbf{P_c}$: Critical Pressure (kPa).
$\mathbf{T_{boil}}$: Normal Boiling Point Temperature (K).
$\mathbf{T_c}$: Critical Temperature (K).
$\mathbf{T_{fus}}$: Normal melting (fusion) point (K).
$\mathbf{V_c}$: Critical Volume (m^3/kg-mol).