1-Octene, 3,3-dimethyl-

Other names: 3,3-Dimethyl-1-octene
Inchi: InChI=1S/C10H20/c1-5-7-8-9-10(3,4)6-2/h6H,2,5,7-9H2,1,3-4H3
InchiKey: LXXSZHUPIQOEPU-UHFFFAOYSA-N
Formula: C10H20
SMILES: C=CC(C)(C)CCCCC
Mol. weight [g/mol]: 140.27
CAS: 74511-51-6

Physical Properties

Property code	Value	Unit	Source
gf	124.00	kJ/mol	Joback Method
hf	-133.05	kJ/mol	Joback Method
hfus	12.96	kJ/mol	Joback Method
hvap	35.89	kJ/mol	Joback Method
log10ws	-3.62		Crippen Method
logp	3.779		Crippen Method
mcvol	147.460	ml/mol	McGowan Method
pc	2231.30	kPa	Joback Method
rinpol	1151.00		NIST Webbook
rinpol	1151.00		NIST Webbook
tb	421.65	K	Joback Method
tc	597.70	K	Joback Method
tf	203.12	K	Joback Method
vc	0.566	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.81	J/mol×K	421.65	Joback Method
cpg	316.91	J/mol×K	450.99	Joback Method
cpg	332.23	J/mol×K	480.33	Joback Method
cpg	346.80	J/mol×K	509.68	Joback Method
cpg	360.67	J/mol×K	539.02	Joback Method
cpg	373.85	J/mol×K	568.36	Joback Method

cpg	386.39	J/mol×K	597.70	Joback Method
dvisc	0.0094858	Pa×s	203.12	Joback Method
dvisc	0.0032586	Pa×s	239.54	Joback Method
dvisc	0.0014841	Pa×s	275.96	Joback Method
dvisc	0.0008120	Pa×s	312.38	Joback Method
dvisc	0.0005039	Pa×s	348.81	Joback Method
dvisc	0.0003422	Pa×s	385.23	Joback Method
dvisc	0.0002485	Pa×s	421.65	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.50118e+01
Coeff. B	-3.92429e+03
Coeff. C	-6.24000e+01
Temperature range (K), min.	328.92
Temperature range (K), max.	466.95

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C74511516&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Joback Method: https://en.wikipedia.org/wiki/Joback_method

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

cpg: Ideal gas heat capacity

dvisc: Dynamic viscosity

gf: Standard Gibbs free energy of formation

hf: Enthalpy of formation at standard conditions

hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume