1-Octene, 3,7-dimethyl-

Other names:	2,6-Dimethyl-7-octene
	3,7-Dimethyl-1-octene
	3,7-Dimethyloct-1-ene
	NSC 157589
Inchi:	InChI=1S/C10H20/c1-5-10(4)8-6-7-9(2)3/h5,9-10H,1,6-8H2,2-4H3
InchiKey:	KSXTZYRIJKDCEA-UHFFFAOYSA-N
Formula:	C10H20
SMILES:	C=CC(C)CCCC(C)C
Mol. weight [g/mol]:	140.27
CAS:	4984-01-4

Physical Properties

Property code	Value	Unit	Source
gf	116.28	kJ/mol	Joback Method
hf	-134.86	kJ/mol	Joback Method
hfus	13.33	kJ/mol	Joback Method
hvap	36.41	kJ/mol	Joback Method
log10ws	-3.38		Crippen Method
logp	3.635		Crippen Method
mcvol	147.460	ml/mol	McGowan Method
pc	2224.99	kPa	Joback Method
rinpol	963.00		NIST Webbook
rinpol	963.00		NIST Webbook
tb	424.00	K	Joback Method
tc	597.01	K	Joback Method
tf	170.70	K	Joback Method
vc	0.565	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.08	J/mol×K	424.00	Joback Method
cpg	314.52	J/mol×K	452.84	Joback Method
cpg	329.33	J/mol×K	481.67	Joback Method

cpg	343.52	J/mol×K	510.51	Joback Method
cpg	357.12	J/mol×K	539.34	Joback Method
cpg	370.13	J/mol×K	568.18	Joback Method
cpg	382.59	J/mol×K	597.01	Joback Method
dvisc	0.0178939	Pa×s	170.70	Joback Method
dvisc	0.0041287	Pa×s	212.92	Joback Method
dvisc	0.0015477	Pa×s	255.13	Joback Method
dvisc	0.0007666	Pa×s	297.35	Joback Method
dvisc	0.0004522	Pa×s	339.57	Joback Method
dvisc	0.0002998	Pa×s	381.78	Joback Method
dvisc	0.0002157	Pa×s	424.00	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.39187e+01
Coeff. B	-3.53486e+03
Coeff. C	-5.98980e+01
Temperature range (K), min.	319.22
Temperature range (K), max.	470.58

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C4984014&Units=SI

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

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