

Decane, 2,2,3-trimethyl-

Other names:	2,2,3-Trimethyldecane
Inchi:	InChI=1S/C13H28/c1-6-7-8-9-10-11-12(2)13(3,4)5/h12H,6-11H2,1-5H3
InchiKey:	BWEUYKNMLNSHIJ-UHFFFAOYSA-N
Formula:	C13H28
SMILES:	CCCCCCCC(C)C(C)(C)C
Mol. weight [g/mol]:	184.36
CAS:	62338-09-4

Physical Properties

Property code	Value	Unit	Source
gf	58.98	kJ/mol	Joback Method
hf	-325.68	kJ/mol	Joback Method
hfus	18.49	kJ/mol	Joback Method
hvap	42.85	kJ/mol	Joback Method
log10ws	-4.78		Crippen Method
logp	5.029		Crippen Method
mcvol	194.030	ml/mol	McGowan Method
pc	1681.03	kPa	Joback Method
tb	493.17	K	Joback Method
tc	665.63	K	Joback Method
tf	223.69	K	Joback Method
vc	0.747	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	457.85	J/molxK	493.17	Joback Method
cpg	476.98	J/molxK	521.91	Joback Method
cpg	495.24	J/molxK	550.66	Joback Method
cpg	512.67	J/molxK	579.40	Joback Method
cpg	529.30	J/molxK	608.14	Joback Method
cpg	545.16	J/molxK	636.89	Joback Method
cpg	560.28	J/molxK	665.63	Joback Method
dvisc	0.0153653	Paxs	223.69	Joback Method

dvisc	0.0039629	Paxs	268.60	Joback Method
dvisc	0.0015069	Paxs	313.52	Joback Method
dvisc	0.0007302	Paxs	358.43	Joback Method
dvisc	0.0004157	Paxs	403.34	Joback Method
dvisc	0.0002650	Paxs	448.26	Joback Method
dvisc	0.0001834	Paxs	493.17	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C62338094&Units=SI

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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