Decane, 3,4-dimethyl-

Other names: 3,4-Dimethyl decane
Inchi: InChI=1S/C12H26/c1-5-7-8-9-10-12(4)11(3)6-2/h11-12H,5-10H2,1-4H3
InchiKey: NRBMEEDORZDRIT-UHFFFAOYSA-N
Formula: C12H26
SMILES: CCCCCCC(C)C(C)CC
Mol. weight [g/mol]: 170.33
CAS: 17312-45-7

Physical Properties

Property code	Value	Unit	Source
gf	45.28	kJ/mol	Joback Method
hf	-301.57	kJ/mol	Joback Method
hfus	19.79	kJ/mol	Joback Method
hvap	41.53	kJ/mol	Joback Method
log10ws	-4.36		Crippen Method
logp	4.639		Crippen Method
mcvol	179.940	ml/mol	McGowan Method
pc	1804.63	kPa	Joback Method
tb	473.08	K	Joback Method
tc	640.63	K	Joback Method
tf	195.00	K	Joback Method
vc	0.696	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	406.97	J/mol×K	473.08	Joback Method
cpg	488.21	J/mol×K	612.70	Joback Method
cpg	473.26	J/mol×K	584.78	Joback Method
cpg	457.68	J/mol×K	556.85	Joback Method
cpg	441.45	J/mol×K	528.93	Joback Method
cpg	424.55	J/mol×K	501.00	Joback Method
cpg	502.54	J/mol×K	640.63	Joback Method
dvisc	0.0001925	Pa×s	473.08	Joback Method

dvisc	0.0002726	Pa×s	426.73	Joback Method
dvisc	0.0004202	Pa×s	380.39	Joback Method
dvisc	0.0007305	Pa×s	334.04	Joback Method
dvisc	0.0015175	Pa×s	287.69	Joback Method
dvisc	0.0041744	Pa×s	241.35	Joback Method
dvisc	0.0185767	Pa×s	195.00	Joback Method

Sources

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=C17312457&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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