Cyclobutane, 1,1-dimethyl-2-octyl-

Other names: 1,1-Dimethyl-2-octyl-cyclobutane
Inchi: InChI=1S/C14H28/c1-4-5-6-7-8-9-10-13-11-12-14(13,2)3/h13H,4-12H2,1-3H3
InchiKey: WTXKICAJBOMWNF-UHFFFAOYSA-N
Formula: C14H28
SMILES: CCCCCCCCC1CCC1(C)C
Mol. weight [g/mol]: 196.37
CAS: 62338-30-1

Physical Properties

Property code	Value	Unit	Source
gf	102.45	kJ/mol	Joback Method
hf	-270.75	kJ/mol	Joback Method
hfus	22.82	kJ/mol	Joback Method
hvap	45.38	kJ/mol	Joback Method
log10ws	-5.09		Crippen Method
logp	5.173		Crippen Method
mcvol	197.260	ml/mol	McGowan Method
pc	1743.37	kPa	Joback Method
tb	526.30	K	Joback Method
tc	708.25	K	Joback Method
tf	281.62	K	Joback Method
vc	0.765	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	494.22	J/mol×K	526.30	Joback Method
cpg	514.59	J/mol×K	556.63	Joback Method
cpg	533.93	J/mol×K	586.95	Joback Method
cpg	552.31	J/mol×K	617.28	Joback Method
cpg	569.82	J/mol×K	647.60	Joback Method
cpg	586.55	J/mol×K	677.93	Joback Method
cpg	602.57	J/mol×K	708.25	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=C62338301&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
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