

Cyclooctane, (1-methylpropyl)-

Other names:	Cyclooctane, sec-butyl-(1-methylpropyl)cyclooctane
Inchi:	InChI=1S/C12H24/c1-3-11(2)12-9-7-5-4-6-8-10-12/h11-12H,3-10H2,1-2H3
InchiKey:	WWQZOWLEGAPJPX-UHFFFAOYSA-N
Formula:	C12H24
SMILES:	CCC(C)C1CCCCCCC1
Mol. weight [g/mol]:	168.32
CAS:	16538-89-9

Physical Properties

Property code	Value	Unit	Source
gf	47.97	kJ/mol	Joback Method
hf	-254.29	kJ/mol	Joback Method
hfus	10.95	kJ/mol	Joback Method
hvap	42.69	kJ/mol	Joback Method
log10ws	-4.26		Crippen Method
logp	4.393		Crippen Method
mcvol	169.080	ml/mol	McGowan Method
pc	2252.53	kPa	Joback Method
tb	501.61	K	Joback Method
tc	713.15	K	Joback Method
tf	210.34	K	Joback Method
vc	0.619	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	396.90	J/mol×K	501.61	Joback Method
cpg	420.65	J/mol×K	536.87	Joback Method
cpg	443.19	J/mol×K	572.12	Joback Method
cpg	464.53	J/mol×K	607.38	Joback Method
cpg	484.70	J/mol×K	642.64	Joback Method
cpg	503.71	J/mol×K	677.89	Joback Method
cpg	521.59	J/mol×K	713.15	Joback Method

dvisc	0.0401988	Pa×s	210.34	Joback Method
dvisc	0.0065853	Pa×s	258.88	Joback Method
dvisc	0.0019101	Pa×s	307.43	Joback Method
dvisc	0.0007765	Pa×s	355.98	Joback Method
dvisc	0.0003918	Pa×s	404.52	Joback Method
dvisc	0.0002289	Pa×s	453.06	Joback Method
dvisc	0.0001484	Pa×s	501.61	Joback Method

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=C16538899&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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