

Cyclooctane, 1,2-dimethyl-

Other names:	1,2-dimethylcyclooctane
Inchi:	InChI=1S/C10H20/c1-9-7-5-3-4-6-8-10(9)2/h9-10H,3-8H2,1-2H3
InchiKey:	OJGUADSLWNGMCA-UHFFFAOYSA-N
Formula:	C10H20
SMILES:	CC1CCCCCCC1C
Mol. weight [g/mol]:	140.27
CAS:	13151-94-5

Physical Properties

Property code	Value	Unit	Source
gf	25.86	kJ/mol	Joback Method
hf	-228.07	kJ/mol	Joback Method
hfus	10.36	kJ/mol	Joback Method
hvap	38.32	kJ/mol	Joback Method
log10ws	-3.42		Crippen Method
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2613.74	kPa	Joback Method
rinpol	1069.00		NIST Webbook
tb	451.62	K	Joback Method
tc	664.17	K	Joback Method
tf	198.56	K	Joback Method
vc	0.511	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.48	J/molxK	451.62	Joback Method
cpg	321.60	J/molxK	487.04	Joback Method
cpg	342.69	J/molxK	522.47	Joback Method
cpg	362.77	J/molxK	557.89	Joback Method
cpg	381.82	J/molxK	593.32	Joback Method
cpg	399.87	J/molxK	628.74	Joback Method
cpg	416.93	J/molxK	664.17	Joback Method

dvisc	0.0157765	Paxs	198.56	Joback Method
dvisc	0.0039995	Paxs	240.74	Joback Method
dvisc	0.0015265	Paxs	282.91	Joback Method
dvisc	0.0007481	Paxs	325.09	Joback Method
dvisc	0.0004318	Paxs	367.27	Joback Method
dvisc	0.0002792	Paxs	409.44	Joback Method
dvisc	0.0001958	Paxs	451.62	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=C13151945&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

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
mvol:	McGowan's characteristic volume
pc:	Critical Pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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