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

Physical Properties

Property code	Value	Unit	Source
af	0.2485		Cheméo Relay (1.0)
gf	25.86	kJ/mol	Joback Method
hf	-228.17	kJ/mol	Cheméo Relay (1.0)
hfus	10.36	kJ/mol	Joback Method
hvap	45.55	kJ/mol	Cheméo Relay (1.0)
ie	9.55	eV	Cheméo Relay (1.0)
log10ws	-5.14		Cheméo Relay (1.0)
logp	3.613		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2613.74	kPa	Joback Method
rinpol	1069.00		NIST Webbook
tb	458.23	K	Cheméo Relay (1.0)
tc	645.04	K	Cheméo Relay (1.0)
tf	236.21	K	Cheméo Relay (1.0)
vc	0.487	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

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

cpg	416.93	J/mol×K	664.17	Joback Method
dvisc	0.0157765	Pa×s	198.56	Joback Method
dvisc	0.0039995	Pa×s	240.74	Joback Method
dvisc	0.0015265	Pa×s	282.91	Joback Method
dvisc	0.0007481	Pa×s	325.09	Joback Method
dvisc	0.0004318	Pa×s	367.27	Joback Method
dvisc	0.0002792	Pa×s	409.44	Joback Method
dvisc	0.0001958	Pa×s	451.62	Joback Method

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13151945&Units=SI

Legend

af:	Acentric Factor
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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	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