

Cyclodecene

Inchi:	InChI=1S/C10H18/c1-2-4-6-8-10-9-7-5-3-1/h1-2H,3-10H2/b2-1+
InchiKey:	UCIYGNATMHQYCT-OWOJBTEDSA-N
Formula:	C10H18
SMILES:	C1=CCCCCCCCC1
Mol. weight [g/mol]:	138.25
CAS:	3618-12-0

Physical Properties

Property code	Value	Unit	Source
gf	47.04	kJ/mol	Joback Method
hf	-141.93	kJ/mol	Joback Method
hfus	5.24	kJ/mol	Joback Method
hvap	39.57	kJ/mol	Joback Method
ie	8.98	eV	NIST Webbook
log10ws	-3.76		Crippen Method
logp	3.677		Crippen Method
mcvol	136.600	ml/mol	McGowan Method
pc	3072.75	kPa	Joback Method
tb	468.66	K	Joback Method
tc	701.87	K	Joback Method
tf	200.76	K	Joback Method
vc	0.483	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	284.41	J/molxK	468.66	Joback Method
cpg	307.04	J/molxK	507.53	Joback Method
cpg	328.42	J/molxK	546.40	Joback Method
cpg	348.57	J/molxK	585.26	Joback Method
cpg	367.50	J/molxK	624.13	Joback Method
cpg	385.21	J/molxK	663.00	Joback Method
cpg	401.72	J/molxK	701.87	Joback Method
dvisc	0.1110929	Paxs	200.76	Joback Method

dvisc	0.0128316	Paxs	245.41	Joback Method
dvisc	0.0028805	Paxs	290.06	Joback Method
dvisc	0.0009633	Paxs	334.71	Joback Method
dvisc	0.0004169	Paxs	379.36	Joback Method
dvisc	0.0002152	Paxs	424.01	Joback Method
dvisc	0.0001260	Paxs	468.66	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C3618120&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
ie:	Ionization energy
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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