Cyclobutane-d8

Inchi: InChI=1S/C4H8/c1-2-4-3-1/h1-4H2/i1D2,2D2,3D2,4D2
InchiKey: PMPVIKIVABFJJI-SVYQBANQSA-N
Formula: C4D8
SMILES: C1CCC1
Mol. weight [g/mol]: 64.16
CAS: 6381-03-9

Physical Properties

Property code	Value	Unit	Source
gf	39.16	kJ/mol	Joback Method
hf	-38.91	kJ/mol	Joback Method
hfus	1.08	kJ/mol	Joback Method
hvap	24.89	kJ/mol	Joback Method
log10ws	-1.39		Crippen Method
logp	1.560		Crippen Method
mcvol	56.360	ml/mol	McGowan Method
pc	5001.51	kPa	Joback Method
tb	306.60	K	Joback Method
tc	493.72	K	Joback Method
tf	153.50	K	Joback Method
vc	0.209	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	71.17	J/mol×K	306.60	Joback Method
cpg	81.17	J/mol×K	337.79	Joback Method
cpg	90.62	J/mol×K	368.97	Joback Method
cpg	99.53	J/mol×K	400.16	Joback Method
cpg	107.93	J/mol×K	431.35	Joback Method
cpg	115.85	J/mol×K	462.53	Joback Method
cpg	123.30	J/mol×K	493.72	Joback Method
dvisc	0.0019353	Pa×s	153.50	Joback Method
dvisc	0.0010758	Pa×s	179.02	Joback Method

dvisc	0.0006924	Pa×s	204.53	Joback Method
dvisc	0.0004914	Pa×s	230.05	Joback Method
dvisc	0.0003735	Pa×s	255.57	Joback Method
dvisc	0.0002984	Pa×s	281.08	Joback Method
dvisc	0.0002474	Pa×s	306.60	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C6381039&Units=SI
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

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