Cyclooctene, (Z)-

Other names:	cis-Cyclooctene
	(Z)-Cyclooctene
	c-Cyclooctene
Inchi:	InChI=1S/C8H14/c1-2-4-6-8-7-5-3-1/h1-2H,3-8H2/b2-1-
InchiKey:	URYYVOIYTNXXBN-UPHRSURJSA-N
Formula:	C8H14
SMILES:	C1=CCCCCCC1
Mol. weight [g/mol]:	110.20
CAS:	931-87-3

Physical Properties

Property code	Value	Unit	Source
gf	54.40	kJ/mol	Joback Method
hf	-28.00 ± 1.90	kJ/mol	NIST Webbook
hf	-22.70	kJ/mol	NIST Webbook
hfus	4.26	kJ/mol	Joback Method
hvap	34.78	kJ/mol	Joback Method
ie	8.82	eV	NIST Webbook
log10ws	-2.92		Crippen Method
logp	2.897		Crippen Method
mcvol	108.420	ml/mol	McGowan Method
pc	3620.24	kPa	Joback Method
rinpol	895.00		NIST Webbook
rinpol	895.00		NIST Webbook
rinpol	883.00		NIST Webbook
rinpol	904.80		NIST Webbook
rinpol	913.00		NIST Webbook
tb	418.70	K	NIST Webbook
tb	418.00 ± 1.00	K	NIST Webbook
tc	635.63	K	Joback Method
tf	261.00 ± 3.00	K	NIST Webbook
tf	258.20 ± 3.00	K	NIST Webbook
vc	0.388	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	197.28	J/mol×K	414.36	Joback Method
cpg	215.41	J/mol×K	451.24	Joback Method
cpg	232.58	J/mol×K	488.12	Joback Method
cpg	248.81	J/mol×K	524.99	Joback Method
cpg	264.12	J/mol×K	561.87	Joback Method
cpg	278.54	J/mol×K	598.75	Joback Method
cpg	292.07	J/mol×K	635.63	Joback Method
dvisc	0.0426132	Pa×s	185.26	Joback Method
dvisc	0.0083526	Pa×s	223.44	Joback Method
dvisc	0.0026344	Pa×s	261.63	Joback Method
dvisc	0.0011148	Pa×s	299.81	Joback Method
dvisc	0.0005729	Pa×s	337.99	Joback Method
dvisc	0.0003370	Pa×s	376.18	Joback Method
dvisc	0.0002186	Pa×s	414.36	Joback Method
hvapt	41.57	kJ/mol	300.00	NIST Webbook

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=C931873&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
hvapt: Enthalpy of vaporization at a given temperature

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