1,5-Cyclooctadiene, 1,5-dimethyl-

Other names:	1,5-Dimethyl cyclooctadiene
	1,5-Dimethyl-1,5-cyclooctadiene
	1,5-Dimethyl-cycloocta-1,5-diene
Inchi:	InChI=1S/C10H16/c1-9-5-3-7-10(2)8-4-6-9/h5,8H,3-4,6-7H2,1-2H3/b9-5-,10-8-
InchiKey:	RYOGZVTWMZNTGL-UDRCNDPASA-N
Formula:	C10H16
SMILES:	CC1=CCCC(C)=CCC1
Mol. weight [g/mol]:	136.23
CAS:	3760-14-3

Physical Properties

Property code	Value	Unit	Source
gf	81.94	kJ/mol	Joback Method
hf	-94.77	kJ/mol	Joback Method
hfus	9.89	kJ/mol	Joback Method
hvap	40.84	kJ/mol	Joback Method
log10ws	-3.61		Crippen Method
logp	3.453		Crippen Method
mcvol	132.300	ml/mol	McGowan Method
pc	2928.17	kPa	Joback Method
rinpol	1047.00		NIST Webbook
tb	469.24	K	Joback Method
tc	689.63	K	Joback Method
tf	233.60	K	Joback Method
vc	0.485	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	271.65	J/mol×K	469.24	Joback Method
cpg	352.62	J/mol×K	652.90	Joback Method
cpg	338.19	J/mol×K	616.17	Joback Method
cpg	322.89	J/mol×K	579.43	Joback Method
cpg	306.71	J/mol×K	542.70	Joback Method

cpg	289.63	J/mol×K	505.97	Joback Method
cpg	366.19	J/mol×K	689.63	Joback Method
dvisc	0.0001578	Pa×s	469.24	Joback Method
dvisc	0.0002222	Pa×s	429.97	Joback Method
dvisc	0.0003350	Pa×s	390.69	Joback Method
dvisc	0.0005538	Pa×s	351.42	Joback Method
dvisc	0.0010387	Pa×s	312.15	Joback Method
dvisc	0.0023348	Pa×s	272.87	Joback Method
dvisc	0.0068914	Pa×s	233.60	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	347.20	K	2.10	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.24128e+01
Coeff. B	-3.15866e+03
Coeff. C	-6.34560e+01
Temperature range (K), min.	323.96
Temperature range (K), max.	508.26

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C3760143&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume