trans-Bicyclo[3.3.0]octane

Inchi: InChI=1S/C8H14/c1-3-7-5-2-6-8(7)4-1/h7-8H,1-6H2/t7-,8-
InchiKey: AEBWATHAIVJLTA-ZKCHVHJHSA-N
Formula: C8H14
SMILES: C1CC2CCCC2C1
Mol. weight [g/mol]: 110.20
CAS: 5597-89-7

Physical Properties

Property code	Value	Unit	Source
chl	-5040.00 ± 2.00	kJ/mol	NIST Webbook
chl	-5041.70 ± 5.00	kJ/mol	NIST Webbook
gf	113.78	kJ/mol	Joback Method
hf	-67.00 ± 3.00	kJ/mol	NIST Webbook
hfl	-109.00 ± 2.00	kJ/mol	NIST Webbook
hfus	8.55	kJ/mol	Joback Method
hvap	42.70 ± 0.80	kJ/mol	NIST Webbook
hvap	42.00	kJ/mol	NIST Webbook
hvap	42.70 ± 0.80	kJ/mol	NIST Webbook
log10ws	-2.48		Crippen Method
logp	2.587		Crippen Method
mcvol	101.860	ml/mol	McGowan Method
pc	3560.02	kPa	Joback Method
tb	407.00 ± 3.00	K	NIST Webbook
tb	405.00 ± 3.00	K	NIST Webbook
tb	409.40 ± 2.00	K	NIST Webbook
tb	405.00 ± 2.00	K	NIST Webbook
tc	614.38	K	Joback Method
tf	237.00 ± 3.00	K	NIST Webbook
tf	244.00 ± 3.00	K	NIST Webbook
tf	243.00 ± 3.00	K	NIST Webbook
vc	0.382	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	198.70	J/mol×K	404.46	Joback Method
cpg	217.06	J/mol×K	439.45	Joback Method
cpg	234.29	J/mol×K	474.43	Joback Method
cpg	250.43	J/mol×K	509.42	Joback Method
cpg	265.55	J/mol×K	544.41	Joback Method
cpg	279.71	J/mol×K	579.39	Joback Method
cpg	292.95	J/mol×K	614.38	Joback Method
cpl	180.30	J/mol×K	308.00	NIST Webbook
dvisc	0.0013767	Pa×s	208.76	Joback Method
dvisc	0.0010230	Pa×s	241.38	Joback Method
dvisc	0.0008158	Pa×s	273.99	Joback Method
dvisc	0.0006827	Pa×s	306.61	Joback Method
dvisc	0.0005912	Pa×s	339.23	Joback Method
dvisc	0.0005251	Pa×s	371.84	Joback Method
dvisc	0.0004754	Pa×s	404.46	Joback Method
hvapt	41.40	kJ/mol	309.00	NIST Webbook
hvapt	41.30 ± 0.40	kJ/mol	320.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	405.20	K	101.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C5597897&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

chl: Standard liquid enthalpy of combustion

cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume