1,3,5-Hexatriene, (E)-

Other names:	(E)-1,3,5-Hexatriene
	(E)-CH2=CHCH=CHCH=CH2
	1,3,5-Hexatriene, trans-
	trans-1,3,5-Hexatriene
	trans-Hexatriene
Inchi:	InChI=1S/C6H8/c1-3-5-6-4-2/h3-6H,1-2H2/b6-5+
InchiKey:	AFVDZBIIBXWASR-AATRIKPKSA-N
Formula:	C6H8
SMILES:	C=CC=CC=C
Mol. weight [g/mol]:	80.13
CAS:	821-07-8

Physical Properties

Property code	Value	Unit	Source
chl	-3630.00 ± 10.00	kJ/mol	NIST Webbook
gf	255.54	kJ/mol	Joback Method
hf	168.00 ± 3.00	kJ/mol	NIST Webbook
hfus	8.94	kJ/mol	Joback Method
hvap	20.50	kJ/mol	NIST Webbook
ie	8.29	eV	NIST Webbook
ie	8.27	eV	NIST Webbook
ie	8.29 ± 0.02	eV	NIST Webbook
ie	8.30 ± 0.02	eV	NIST Webbook
log10ws	-1.89		Crippen Method
logp	1.915		Crippen Method
mcvol	82.500	ml/mol	McGowan Method
pc	3637.73	kPa	Joback Method
tb	353.40 ± 2.00	K	NIST Webbook
tc	514.08	K	Joback Method
tf	148.78	K	Joback Method
vc	0.314	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	119.39	J/mol×K	334.20	Joback Method
cpg	128.51	J/mol×K	364.18	Joback Method
cpg	137.13	J/mol×K	394.16	Joback Method
cpg	145.27	J/mol×K	424.14	Joback Method
cpg	152.97	J/mol×K	454.12	Joback Method
cpg	160.23	J/mol×K	484.10	Joback Method
cpg	167.09	J/mol×K	514.08	Joback Method
dvisc	0.0024391	Pa×s	148.78	Joback Method
dvisc	0.0010595	Pa×s	179.68	Joback Method
dvisc	0.0005878	Pa×s	210.59	Joback Method
dvisc	0.0003792	Pa×s	241.49	Joback Method
dvisc	0.0002702	Pa×s	272.39	Joback Method
dvisc	0.0002063	Pa×s	303.30	Joback Method
dvisc	0.0001656	Pa×s	334.20	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47716e+01
Coeff. B	-3.19210e+03
Coeff. C	-3.89090e+01
Temperature range (K), min.	259.30
Temperature range (K), max.	376.34

Sources

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=C821078&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

Legend

chl:	Standard liquid enthalpy of combustion
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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume