trans,trans,trans-1,2,3,4-Tetravinylcyclobutane

Inchi: InChI=1S/C12H16/c1-5-9-10(6-2)12(8-4)11(9)7-3/h5-12H,1-4H2/t9-,10-,11+,12+
InchiKey: XXHDHKZTASMVSX-HUVAQWKNSA-N
Formula: C12H16
SMILES: C=CC1C(C=C)C(C=C)C1C=C
Mol. weight [g/mol]: 160.26
CAS: 87753-95-5

Physical Properties

Property code	Value	Unit	Source
gf	427.04	kJ/mol	Joback Method
hf	216.33	kJ/mol	Joback Method
hfus	20.96	kJ/mol	Joback Method
hvap	38.78	kJ/mol	Joback Method
ie	8.60	eV	NIST Webbook
ie	9.02	eV	NIST Webbook
log10ws	-3.19		Crippen Method
logp	3.209		Crippen Method
mcvol	151.880	ml/mol	McGowan Method
pc	2171.40	kPa	Joback Method
tb	457.68	K	Joback Method
tc	650.76	K	Joback Method
tf	219.66	K	Joback Method
vc	0.578	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	322.93	J/mol×K	457.68	Joback Method
cpg	340.98	J/mol×K	489.86	Joback Method
cpg	358.09	J/mol×K	522.04	Joback Method
cpg	374.29	J/mol×K	554.22	Joback Method
cpg	389.62	J/mol×K	586.40	Joback Method
cpg	404.13	J/mol×K	618.58	Joback Method
cpg	417.84	J/mol×K	650.76	Joback Method

dvisc	0.0004836	Pa×s	219.66	Joback Method
dvisc	0.0004404	Pa×s	259.33	Joback Method
dvisc	0.0004112	Pa×s	299.00	Joback Method
dvisc	0.0003901	Pa×s	338.67	Joback Method
dvisc	0.0003743	Pa×s	378.34	Joback Method
dvisc	0.0003619	Pa×s	418.01	Joback Method
dvisc	0.0003519	Pa×s	457.68	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C87753955&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

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
ie:	Ionization energy
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