Cyclohexane, 1,1'-[3-(3-cyclopentylpropyl)-1,5-pentanediyl]bis-

Other names: 1,5-Dicyclohexyl-3-(3'-cyclopentylpropyl)pentane
1-Cyclohexyl-3-(cyclohexylethyl)-6-cyclopentylhexane

Inchi: InChI=1S/C25H46/c1-3-10-23(11-4-1)18-20-25(17-9-16-22-14-7-8-15-22)21-19-24-12-5-2

InchiKey: FACBIRPZNJRFHX-UHFFFAOYSA-N

Formula: C25H46

SMILES: C1CCC(CCC(CCCC2CCCC2)CCC2CCCCC2)CC1

Mol. weight [g/mol]: 346.63

CAS: 55401-70-2

Physical Properties

Property code	Value	Unit	Source
gf	242.63	kJ/mol	Joback Method
hf	-395.49	kJ/mol	Joback Method
hfus	34.59	kJ/mol	Joback Method
hvap	71.97	kJ/mol	Joback Method
log10ws	-9.00		Crippen Method
logp	8.684		Crippen Method
mcvol	330.530	ml/mol	McGowan Method
pc	1096.44	kPa	Joback Method
tb	825.34	K	Joback Method
tc	1041.97	K	Joback Method
tf	382.17	K	Joback Method
vc	1.236	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1284.58	J/mol×K	1041.97	Joback Method
cpg	1266.21	J/mol×K	1005.87	Joback Method
cpg	1246.31	J/mol×K	969.76	Joback Method
cpg	1224.77	J/mol×K	933.66	Joback Method
cpg	1201.50	J/mol×K	897.55	Joback Method
cpg	1176.41	J/mol×K	861.45	Joback Method
cpg	1149.39	J/mol×K	825.34	Joback Method

dvisc	0.0041251	Pa×s	382.17	Joback Method
dvisc	0.0000740	Pa×s	825.34	Joback Method
dvisc	0.0001041	Pa×s	751.48	Joback Method
dvisc	0.0001576	Pa×s	677.62	Joback Method
dvisc	0.0002642	Pa×s	603.75	Joback Method
dvisc	0.0005115	Pa×s	529.89	Joback Method
dvisc	0.0012266	Pa×s	456.03	Joback Method
hvapt	91.40	kJ/mol	505.50	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=C55401702&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
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

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