Cyclohexane, 1,1'-(1,5-pentanediyl)bis-

Inchi: InChI=1S/C17H32/c1-4-10-16(11-5-1)14-8-3-9-15-17-12-6-2-7-13-17/h16-17H,1-15H2
InchiKey: ALPSDJDPJHLYKS-UHFFFAOYSA-N
Formula: C17H32
SMILES: C1CCC(CCCCCC2CCCCC2)CC1
Mol. weight [g/mol]: 236.44
CAS: 54833-31-7

Physical Properties

Property code	Value	Unit	Source
chl	-10930.00	kJ/mol	NIST Webbook
gf	141.16	kJ/mol	Joback Method
hf	-285.57	kJ/mol	Joback Method
hfus	23.46	kJ/mol	Joback Method
hvap	54.29	kJ/mol	Joback Method
log10ws	-6.24		Crippen Method
logp	6.098		Crippen Method
mcvol	228.670	ml/mol	McGowan Method
pc	1679.66	kPa	Joback Method
tb	584.00 ± 5.00	K	NIST Webbook
tb	598.30 ± 0.30	K	NIST Webbook
tb	584.00 ± 5.00	K	NIST Webbook
tb	588.00 ± 8.00	K	NIST Webbook
tc	839.61	K	Joback Method
tf	259.54 ± 1.00	K	NIST Webbook
tf	259.54 ± 0.20	K	NIST Webbook
vc	0.854	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	658.62	J/mol×K	627.46	Joback Method
cpg	776.38	J/mol×K	804.25	Joback Method
cpg	755.83	J/mol×K	768.89	Joback Method
cpg	733.83	J/mol×K	733.54	Joback Method

cpg	710.34	J/mol×K	698.18	Joback Method
cpg	685.29	J/mol×K	662.82	Joback Method
cpg	795.54	J/mol×K	839.61	Joback Method
dvisc	0.0001557	Pa×s	627.46	Joback Method
dvisc	0.0002171	Pa×s	572.24	Joback Method
dvisc	0.0003249	Pa×s	517.01	Joback Method
dvisc	0.0005354	Pa×s	461.79	Joback Method
dvisc	0.0010106	Pa×s	406.56	Joback Method
dvisc	0.0023293	Pa×s	351.34	Joback Method
dvisc	0.0073304	Pa×s	296.11	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C54833317&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
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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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