Cyclopentane, 1,1'-[4-(3-cyclopentylpropyl)-1,7-heptanediyl]bis-

Other names: 1,7-Dicyclopentyl-4-(3-cyclopentylpropyl)heptane
Inchi: InChI=1S/C25H46/c1-2-11-22(10-1)16-7-19-25(20-8-17-23-12-3-4-13-23)21-9-18-24-14-5
InchiKey: GGMFQOVCHUDPGX-UHFFFAOYSA-N
Formula: C25H46
SMILES: C1CCC(CCCC(CCCC2CCCC2)CCCC2CCCC2)C1
Mol. weight [g/mol]: 346.63
CAS: 55429-35-1

Physical Properties

Property code	Value	Unit	Source
gf	266.83	kJ/mol	Joback Method
hf	-383.17	kJ/mol	Joback Method
hfus	38.79	kJ/mol	Joback Method
hvap	71.63	kJ/mol	Joback Method
log10ws	-9.00		Crippen Method
logp	8.684		Crippen Method
mcvol	330.530	ml/mol	McGowan Method
pc	1061.02	kPa	Joback Method
tb	816.80	K	Joback Method
tc	1024.36	K	Joback Method
tf	249.45 ± 0.50	K	NIST Webbook
tf	249.50 ± 2.00	K	NIST Webbook
vc	1.252	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1253.85	J/mol×K	989.77	Joback Method
cpg	1272.62	J/mol×K	1024.36	Joback Method
cpg	1139.30	J/mol×K	816.80	Joback Method
cpg	1165.31	J/mol×K	851.39	Joback Method
cpg	1189.67	J/mol×K	885.99	Joback Method
cpg	1212.48	J/mol×K	920.58	Joback Method
cpg	1233.84	J/mol×K	955.18	Joback Method

dvisc	0.0001508	Pa×s	816.80	Joback Method
dvisc	0.0002005	Pa×s	745.53	Joback Method
dvisc	0.0039877	Pa×s	389.21	Joback Method
dvisc	0.0015143	Pa×s	460.47	Joback Method
dvisc	0.0007455	Pa×s	531.74	Joback Method
dvisc	0.0004339	Pa×s	603.00	Joback Method
dvisc	0.0002832	Pa×s	674.27	Joback Method
hvapt	88.90	kJ/mol	505.50	NIST Webbook
hvapt	87.60	kJ/mol	491.00	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=C55429351&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