1-cyclopentylicosane

Other names: Cyclopentane, eicosyl
1-cyclopentyleicosane
Inchi: InChI=1S/C25H50/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-22-25-23-20-21-24
InchiKey: XASCPEKVIMHPQA-UHFFFAOYSA-N
Formula: C25H50
SMILES: CCCCCCCCCCCCCCCCCCCCC1CCCC1
Mol. weight [g/mol]: 350.66
CAS: 22331-38-0

Physical Properties

Property code	Value	Unit	Source
gf	196.17	kJ/mol	Joback Method
hf	-498.85	kJ/mol	Joback Method
hfus	54.44	kJ/mol	Joback Method
hvap	71.50	kJ/mol	Joback Method
log10ws	-9.94		Crippen Method
logp	9.608		Crippen Method
mcvol	352.250	ml/mol	McGowan Method
pc	846.03	kPa	Joback Method
rinpol	2568.68		NIST Webbook
rinpol	2590.00		NIST Webbook
rinpol	2568.68		NIST Webbook
ripol	2647.71		NIST Webbook
ripol	2647.71		NIST Webbook
tb	786.68	K	Joback Method
tc	966.98	K	Joback Method
tf	382.41	K	Joback Method
vc	1.377	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1147.50	J/mol×K	786.68	Joback Method
cpg	1171.30	J/mol×K	816.73	Joback Method

cpg	1193.90	J/mol×K	846.78	Joback Method
cpg	1215.35	J/mol×K	876.83	Joback Method
cpg	1235.70	J/mol×K	906.88	Joback Method
cpg	1255.02	J/mol×K	936.93	Joback Method
cpg	1273.34	J/mol×K	966.98	Joback Method
dvisc	0.0023611	Pa×s	382.41	Joback Method
dvisc	0.0008610	Pa×s	449.79	Joback Method
dvisc	0.0004083	Pa×s	517.17	Joback Method
dvisc	0.0002300	Pa×s	584.54	Joback Method
dvisc	0.0001459	Pa×s	651.92	Joback Method
dvisc	0.0001008	Pa×s	719.30	Joback Method
dvisc	0.0000741	Pa×s	786.68	Joback Method

Sources

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=C22331380&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
pc: Critical Pressure
rinpol: Non-polar retention indices
ripol: Polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point

vc: Critical Volume