Cyclopentane, 1-methyl-2-pentyl, trans

Other names: trans-1-Methyl-2-pentylcyclopentane
Inchi: InChI=1S/C11H22/c1-3-4-5-8-11-9-6-7-10(11)2/h10-11H,3-9H2,1-2H3/t10-,11-/m1/s1
InchiKey: WBIQVPXLBVMXEA-GHMZBOCLSA-N
Formula: C11H22
SMILES: CCCCCC1CCCC1C
Mol. weight [g/mol]: 154.29

Physical Properties

Property code	Value	Unit	Source
gf	70.58	kJ/mol	Joback Method
hf	-230.23	kJ/mol	Joback Method
hfus	19.25	kJ/mol	Joback Method
hvap	40.03	kJ/mol	Joback Method
log10ws	-3.84		Crippen Method
logp	4.003		Crippen Method
mcvol	154.990	ml/mol	McGowan Method
pc	2210.37	kPa	Joback Method
rinpol	1088.00		NIST Webbook
rinpol	1085.00		NIST Webbook
rinpol	1081.00		NIST Webbook
rinpol	1081.00		NIST Webbook
rinpol	1085.00		NIST Webbook
rinpol	1081.00		NIST Webbook
rinpol	1088.00		NIST Webbook
rinpol	1085.00		NIST Webbook
tb	461.69	K	Joback Method
tc	648.77	K	Joback Method
tf	220.39	K	Joback Method
vc	0.592	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	346.22	J/mol×K	461.69	Joback Method

cpg	365.75	J/mol×K	492.87	Joback Method
cpg	384.40	J/mol×K	524.05	Joback Method
cpg	402.19	J/mol×K	555.23	Joback Method
cpg	419.15	J/mol×K	586.41	Joback Method
cpg	435.30	J/mol×K	617.59	Joback Method
cpg	450.67	J/mol×K	648.77	Joback Method
dvisc	0.0033159	Pa×s	220.39	Joback Method
dvisc	0.0016355	Pa×s	260.61	Joback Method
dvisc	0.0009745	Pa×s	300.82	Joback Method
dvisc	0.0006560	Pa×s	341.04	Joback Method
dvisc	0.0004801	Pa×s	381.26	Joback Method
dvisc	0.0003729	Pa×s	421.47	Joback Method
dvisc	0.0003027	Pa×s	461.69	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=R10650&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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point

vc: Critical Volume