Eicosane, 2,6,10,14,18-pentamethyl-

Other names: 2,6,10,14,18-Pentamethyleicosane
Inchi: InChI=1S/C25H52/c1-8-22(4)14-10-16-24(6)18-12-20-25(7)19-11-17-23(5)15-9-13-21(2)
InchiKey: SJBLBJCIOBWHAC-UHFFFAOYSA-N
Formula: C25H52
SMILES: CCC(C)CCCC(C)CCCC(C)CCCC(C)CCCC(C)C
Mol. weight [g/mol]: 352.68
CAS: 51794-16-2

Physical Properties

Property code	Value	Unit	Source
gf	147.42	kJ/mol	Joback Method
hf	-585.73	kJ/mol	Joback Method
hfus	42.89	kJ/mol	Joback Method
hvap	69.30	kJ/mol	Joback Method
log10ws	-9.08		Crippen Method
logp	9.278		Crippen Method
mcvol	363.110	ml/mol	McGowan Method
pc	781.12	kPa	Joback Method
rinpol	2210.00		NIST Webbook
rinpol	2242.00		NIST Webbook
tb	769.20	K	Joback Method
tc	945.36	K	Joback Method
tf	296.51	K	Joback Method
vc	1.405	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1153.43	J/mol×K	769.20	Joback Method
cpg	1177.26	J/mol×K	798.56	Joback Method
cpg	1199.94	J/mol×K	827.92	Joback Method
cpg	1221.49	J/mol×K	857.28	Joback Method
cpg	1241.98	J/mol×K	886.64	Joback Method
cpg	1261.43	J/mol×K	916.00	Joback Method

cpg	1279.90	J/mol×K	945.36	Joback Method
dvisc	0.0123062	Pa×s	296.51	Joback Method
dvisc	0.0016321	Pa×s	375.29	Joback Method
dvisc	0.0004363	Pa×s	454.07	Joback Method
dvisc	0.0001723	Pa×s	532.86	Joback Method
dvisc	0.0000864	Pa×s	611.64	Joback Method
dvisc	0.0000508	Pa×s	690.42	Joback Method
dvisc	0.0000332	Pa×s	769.20	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C51794162&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

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

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