1,7-Dimethyl-4-(1-methylethyl)cyclodecane

Inchi: InChI=1S/C15H30/c1-12(2)15-10-8-13(3)6-5-7-14(4)9-11-15/h12-15H,5-11H2,1-4H3
InchiKey: IBMAYSYTZAVZPY-UHFFFAOYSA-N
Formula: C15H30
SMILES: CC1CCCC(C)CCC(C(C)C)CC1
Mol. weight [g/mol]: 210.40
CAS: 645-10-3

Physical Properties

Property code	Value	Unit	Source
gf	33.61	kJ/mol	Joback Method
hf	-369.21	kJ/mol	Joback Method
hfus	16.66	kJ/mol	Joback Method
hvap	49.09	kJ/mol	Joback Method
log10ws	-5.03		Crippen Method
logp	5.275		Crippen Method
mcvol	211.350	ml/mol	McGowan Method
pc	1720.31	kPa	Joback Method
tb	569.45	K	Joback Method
tc	785.52	K	Joback Method
tf	228.63	K	Joback Method
vc	0.768	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	559.87	J/mol×K	569.45	Joback Method
cpg	588.12	J/mol×K	605.46	Joback Method
cpg	614.87	J/mol×K	641.47	Joback Method
cpg	640.11	J/mol×K	677.48	Joback Method
cpg	663.85	J/mol×K	713.49	Joback Method
cpg	686.09	J/mol×K	749.51	Joback Method
cpg	706.83	J/mol×K	785.52	Joback Method
dvisc	0.0283190	Pa×s	228.63	Joback Method
dvisc	0.0040194	Pa×s	285.43	Joback Method

dvisc	0.0010907	Pa×s	342.24	Joback Method
dvisc	0.0004291	Pa×s	399.04	Joback Method
dvisc	0.0002130	Pa×s	455.84	Joback Method
dvisc	0.0001235	Pa×s	512.65	Joback Method
dvisc	0.0000798	Pa×s	569.45	Joback Method

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=C645103&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
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