Cyclopentadecanol

Other names: cyclopentadecan-1-ol
Inchi: InChI=1S/C15H30O/c16-15-13-11-9-7-5-3-1-2-4-6-8-10-12-14-15/h15-16H,1-14H2
InchiKey: FFVHXGZXDRXFLQ-UHFFFAOYSA-N
Formula: C15H30O
SMILES: OC1CCCCCCCCCCCCCC1
Mol. weight [g/mol]: 226.40
CAS: 4727-17-7

Physical Properties

Property code	Value	Unit	Source
gf	-145.85	kJ/mol	Joback Method
hf	-506.28	kJ/mol	Joback Method
hfus	11.63	kJ/mol	Joback Method
hvap	67.64	kJ/mol	Joback Method
log10ws	-5.37		Crippen Method
logp	4.822		Crippen Method
mcvol	217.220	ml/mol	McGowan Method
pc	2191.78	kPa	Joback Method
rinpol	1987.00		NIST Webbook
rinpol	1987.00		NIST Webbook
tb	692.76	K	Joback Method
tc	922.24	K	Joback Method
tf	295.33	K	Joback Method
vc	0.755	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	660.32	J/mol×K	692.76	Joback Method
cpg	686.37	J/mol×K	731.01	Joback Method
cpg	710.48	J/mol×K	769.25	Joback Method
cpg	732.60	J/mol×K	807.50	Joback Method
cpg	752.72	J/mol×K	845.75	Joback Method
cpg	770.81	J/mol×K	884.00	Joback Method

cpg	786.84	J/mol×K	922.24	Joback Method
dvisc	0.1132270	Pa×s	295.33	Joback Method
dvisc	0.0037649	Pa×s	361.57	Joback Method
dvisc	0.0003592	Pa×s	427.81	Joback Method
dvisc	0.0000643	Pa×s	494.04	Joback Method
dvisc	0.0000173	Pa×s	560.28	Joback Method
dvisc	0.0000061	Pa×s	626.52	Joback Method
dvisc	0.0000027	Pa×s	692.76	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	450.70	K	1.50	NIST Webbook
tbrp	418.20	K	0.04	NIST Webbook

Sources

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=C4727177&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume