

Cembrene C

Inchi: InChI=1S/C20H32/c1-16(2)20-14-12-18(4)10-6-8-17(3)9-7-11-19(5)13-15-20/h8,10-12,14-16,18,20
InchiKey: DMHADBQKVWXPPM-HPKGDIXISSA-N
Formula: C20H32
SMILES: CC1=CCC=C(C)CCC=C(C)CCC(C(C)C)C=C1
Mol. weight [g/mol]: 272.47

Physical Properties

Property code	Value	Unit	Source
gf	133.68	kJ/mol	Joback Method
hf	-259.66	kJ/mol	Joback Method
hfus	22.79	kJ/mol	Joback Method
hvap	64.69	kJ/mol	Joback Method
log10ws	-7.02		Crippen Method
logp	6.618		Crippen Method
mcvol	264.600	ml/mol	McGowan Method
pc	1450.14	kPa	Joback Method
rinpol	2002.00		NIST Webbook
rinpol	2002.00		NIST Webbook
rinpol	2002.00		NIST Webbook
tb	721.85	K	Joback Method
tc	956.66	K	Joback Method
tf	319.98	K	Joback Method
vc	0.963	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	774.53	J/molxK	721.85	Joback Method
cpg	800.86	J/molxK	760.98	Joback Method
cpg	825.16	J/molxK	800.12	Joback Method
cpg	847.39	J/molxK	839.25	Joback Method
cpg	867.55	J/molxK	878.39	Joback Method
cpg	885.60	J/molxK	917.52	Joback Method
cpg	901.53	J/molxK	956.66	Joback Method

dvisc	0.0041014	Paxs	319.98	Joback Method
dvisc	0.0006090	Paxs	386.96	Joback Method
dvisc	0.0001588	Paxs	453.94	Joback Method
dvisc	0.0000585	Paxs	520.91	Joback Method
dvisc	0.0000270	Paxs	587.89	Joback Method
dvisc	0.0000146	Paxs	654.87	Joback Method
dvisc	0.0000089	Paxs	721.85	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R286374&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

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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