Tricyclo[3.3.1.13,7]decane,tricyclo[3.3.1.13,7]decy

Other names: [2,2']Biadamantanylidene
2,2'-Biadamantanyliden
Inchi: InChI=1S/C20H28/c1-11-3-15-5-12(1)6-16(4-11)19(15)20-17-7-13-2-14(9-17)10-18(20)8-
InchiKey: KRDXURLKZNAXAQ-VXPUYCOJSA-N
Formula: C20H28
SMILES: C1C2CC3CC1CC(C2)C3=C1C2CC3CC(C2)CC1C3
Mol. weight [g/mol]: 268.44
CAS: 30541-56-1

Physical Properties

Property code	Value	Unit	Source
gf	453.10	kJ/mol	Joback Method
hf	-37.49	kJ/mol	Joback Method
hfus	34.75	kJ/mol	Joback Method
hvap	60.93	kJ/mol	Joback Method
ie	7.84	eV	NIST Webbook
log10ws	-5.48		Crippen Method
logp	5.195		Crippen Method
mcvol	223.200	ml/mol	McGowan Method
pc	1783.35	kPa	Joback Method
tb	705.76	K	Joback Method
tc	939.61	K	Joback Method
tf	433.08	K	Joback Method
vc	0.866	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	748.10	J/mol×K	705.76	Joback Method
cpg	860.77	J/mol×K	900.64	Joback Method
cpg	840.69	J/mol×K	861.66	Joback Method
cpg	819.62	J/mol×K	822.69	Joback Method
cpg	797.32	J/mol×K	783.71	Joback Method
cpg	773.55	J/mol×K	744.74	Joback Method

cpg	880.09	J/mol×K	939.61	Joback Method
dvisc	0.0329500	Pa×s	705.76	Joback Method
dvisc	0.0294018	Pa×s	660.31	Joback Method
dvisc	0.0257975	Pa×s	614.87	Joback Method
dvisc	0.0221675	Pa×s	569.42	Joback Method
dvisc	0.0185536	Pa×s	523.97	Joback Method
dvisc	0.0150128	Pa×s	478.53	Joback Method
dvisc	0.0116196	Pa×s	433.08	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=C30541561&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
ie: Ionization energy
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

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