Cyclopentane, nonafluoro-

Other names: Nonafluorocyclopentane
Inchi: InChI=1S/C5HF9/c6-1-2(7,8)4(11,12)5(13,14)3(1,9)10/h1H
InchiKey: SOJZMJXWEOBDIC-UHFFFAOYSA-N
Formula: C5HF9
SMILES: FC1C(F)(F)C(F)(F)C(F)(F)C1(F)F
Mol. weight [g/mol]: 232.05
CAS: 376-65-8

Physical Properties

Property code	Value	Unit	Source
gf	-1778.32	kJ/mol	Joback Method
hf	-1871.44	kJ/mol	Joback Method
hfus	9.45	kJ/mol	Joback Method
hvap	29.40	kJ/mol	NIST Webbook
log10ws	-3.03		Crippen Method
logp	2.879		Crippen Method
mcvol	86.380	ml/mol	McGowan Method
pc	2844.44	kPa	Joback Method
tb	304.79	K	Joback Method
tc	440.59	K	Joback Method
tf	240.96	K	Joback Method
vc	0.406	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	167.02	J/mol×K	304.79	Joback Method
cpg	180.73	J/mol×K	327.42	Joback Method
cpg	193.18	J/mol×K	350.06	Joback Method
cpg	204.45	J/mol×K	372.69	Joback Method
cpg	214.61	J/mol×K	395.32	Joback Method
cpg	223.77	J/mol×K	417.96	Joback Method
cpg	231.99	J/mol×K	440.59	Joback Method
hvapt	29.60	kJ/mol	318.50	NIST Webbook

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=C376658&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

cpg:	Ideal gas heat capacity
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
hvapt:	Enthalpy of vaporization at a given temperature
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