1-Nonene, 1,1,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-octadecafluoro-

Other names: perfluorononon-1-ene
perfluoro-1-nonene
Inchi: InChI=1S/C9F18/c10-1(2(11)12)3(13,14)4(15,16)5(17,18)6(19,20)7(21,22)8(23,24)9(25,2
InchiKey: UAFOIVDGAVVKTE-UHFFFAOYSA-N
Formula: C9F18
SMILES: FC(F)=C(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 450.07
CAS: 376-22-7

Physical Properties

Property code	Value	Unit	Source
gf	-3398.68	kJ/mol	Joback Method
hf	-3722.68	kJ/mol	Joback Method
hfus	20.19	kJ/mol	Joback Method
hvap	11.97	kJ/mol	Joback Method
log10ws	-7.04		Crippen Method
logp	6.438		Crippen Method
mcvol	165.230	ml/mol	McGowan Method
pc	1374.80	kPa	Joback Method
rinpol	423.00		NIST Webbook
tb	396.00 ± 3.00	K	NIST Webbook
tc	483.99	K	Joback Method
tf	185.75	K	Joback Method
vc	0.768	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	408.73	J/mol×K	373.49	Joback Method
cpg	422.19	J/mol×K	391.91	Joback Method
cpg	434.86	J/mol×K	410.32	Joback Method
cpg	446.77	J/mol×K	428.74	Joback Method
cpg	457.93	J/mol×K	447.16	Joback Method
cpg	468.39	J/mol×K	465.57	Joback Method

cpg	478.17	J/mol×K	483.99	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=C376227&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
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