1H,1H,2H-Perfluoro-1-octene

Other names: 1-Octene, 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluoro-
3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooct-1-ene
Inchi: InChI=1S/C8H3F13/c1-2-3(9,10)4(11,12)5(13,14)6(15,16)7(17,18)8(19,20)21/h2H,1H2
InchiKey: FYQFWFHDPNXORA-UHFFFAOYSA-N
Formula: C8H3F13
SMILES: C=CC(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)C(F)(F)F
Mol. weight [g/mol]: 346.09
CAS: 25291-17-2

Physical Properties

Property code	Value	Unit	Source
gf	-2411.17	kJ/mol	Joback Method
hf	-2684.95	kJ/mol	Joback Method
hfus	10.75	kJ/mol	Joback Method
hvap	14.34	kJ/mol	Joback Method
log10ws	-5.26		Crippen Method
logp	4.911		Crippen Method
mcvol	142.290	ml/mol	McGowan Method
pc	1714.61	kPa	Joback Method
tb	379.50 ± 0.50	K	NIST Webbook
tc	472.14	K	Joback Method
tf	200.35	K	Joback Method
vc	0.632	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	323.72	J/mol×K	350.25	Joback Method
cpg	337.50	J/mol×K	370.56	Joback Method
cpg	350.45	J/mol×K	390.88	Joback Method
cpg	362.60	J/mol×K	411.19	Joback Method
cpg	373.98	J/mol×K	431.51	Joback Method
cpg	384.63	J/mol×K	451.82	Joback Method
cpg	394.56	J/mol×K	472.14	Joback Method

Sources

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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C25291172&Units=SI

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume