2,3-Dichlorooctafluorobutane

Other names: Butane, 2,3-dichloro-1,1,1,2,3,4,4,4-octafluoro-
Inchi: InChI=1S/C4Cl2F8/c5-1(7,3(9,10)11)2(6,8)4(12,13)14
InchiKey: LXANZHXWGZWFAC-UHFFFAOYSA-N
Formula: C4Cl2F8
SMILES: FC(F)(F)C(F)(Cl)C(F)(Cl)C(F)(F)F
Mol. weight [g/mol]: 270.94
CAS: 355-20-4

Physical Properties

Property code	Value	Unit	Source
gf	-1588.18	kJ/mol	Joback Method
hf	-1761.25	kJ/mol	Joback Method
hfus	9.49	kJ/mol	Joback Method
hvap	21.55	kJ/mol	Joback Method
log10ws	-4.05		Crippen Method
logp	3.920		Crippen Method
mcvol	105.860	ml/mol	McGowan Method
pc	2603.08	kPa	Joback Method
tb	336.00	K	NIST Webbook
tc	497.76	K	Joback Method
tf	209.08	K	Joback Method
vc	0.458	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	210.51	J/mol×K	347.02	Joback Method
cpg	220.26	J/mol×K	372.14	Joback Method
cpg	229.22	J/mol×K	397.27	Joback Method
cpg	237.43	J/mol×K	422.39	Joback Method
cpg	244.93	J/mol×K	447.52	Joback Method
cpg	251.76	J/mol×K	472.64	Joback Method
cpg	257.95	J/mol×K	497.76	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C355204&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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

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