1,1,2,2-Tetrafluorocyclopropane

Inchi: InChI=1S/C3H2F4/c4-2(5)1-3(2,6)7/h1H2
InchiKey: GAUOXRYNXHWONS-UHFFFAOYSA-N
Formula: C3H2F4
SMILES: FC1(F)CC1(F)F
Mol. weight [g/mol]: 114.04
CAS: 3899-71-6

Physical Properties

Property code	Value	Unit	Source
gf	-762.80	kJ/mol	Joback Method
hf	-650.00 ± 29.00	kJ/mol	NIST Webbook
hfus	2.46	kJ/mol	Joback Method
hvap	16.31	kJ/mol	Joback Method
log10ws	-1.60		Crippen Method
logp	1.661		Crippen Method
mcvol	49.350	ml/mol	McGowan Method
pc	4450.38	kPa	Joback Method
tb	267.67	K	Joback Method
tc	417.80	K	Joback Method
tf	187.43	K	Joback Method
vc	0.228	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	70.62	J/mol×K	267.67	Joback Method
cpg	80.84	J/mol×K	292.69	Joback Method
cpg	90.04	J/mol×K	317.71	Joback Method
cpg	98.30	J/mol×K	342.74	Joback Method
cpg	105.69	J/mol×K	367.76	Joback Method
cpg	112.26	J/mol×K	392.78	Joback Method
cpg	118.09	J/mol×K	417.80	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3899716&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