Pentane, 2,2-difluoro

Inchi: InChI=1S/C5H10F2/c1-3-4-5(2,6)7/h3-4H2,1-2H3
InchiKey: QSWGSLWFQDIXSH-UHFFFAOYSA-N
Formula: C5H10F2
SMILES: CCCC(C)(F)F
Mol. weight [g/mol]: 108.13
CAS: 371-65-3

Physical Properties

Property code	Value	Unit	Source
gf	-395.56	kJ/mol	Joback Method
hf	-547.50	kJ/mol	Joback Method
hfus	7.45	kJ/mol	Joback Method
hvap	23.79	kJ/mol	Joback Method
log10ws	-2.23		Crippen Method
logp	2.442		Crippen Method
mcvol	84.850	ml/mol	McGowan Method
pc	3195.54	kPa	Joback Method
tb	333.00 ± 1.00	K	NIST Webbook
tc	463.73	K	Joback Method
tf	149.71	K	Joback Method
vc	0.341	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	140.86	J/mol×K	309.11	Joback Method
cpg	150.59	J/mol×K	334.88	Joback Method
cpg	159.90	J/mol×K	360.65	Joback Method
cpg	168.79	J/mol×K	386.42	Joback Method
cpg	177.28	J/mol×K	412.19	Joback Method
cpg	185.38	J/mol×K	437.96	Joback Method
cpg	193.12	J/mol×K	463.73	Joback Method
hvapt	33.70	kJ/mol	314.50	NIST Webbook

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C371653&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
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