Hexafluoroglutaric acid

Other names:	Perfluoroglutaric acid
	Pentanedioic acid, hexafluoro-
	Glutaric acid, hexafluoro-
Inchi:	InChI=1S/C5H2F6O4/c6-3(7,1(12)13)5(10,11)4(8,9)2(14)15/h(H,12,13)(H,14,15)
InchiKey:	CCUWGJDGLACFQT-UHFFFAOYSA-N
Formula:	C5H2F6O4
SMILES:	O=C(O)C(F)(F)C(F)(F)C(F)(F)C(=O)O
Mol. weight [g/mol]:	240.06
CAS:	376-73-8

Physical Properties

Property code	Value	Unit	Source
gf	-1700.60	kJ/mol	Joback Method
hf	-1879.06	kJ/mol	Joback Method
hfus	16.32	kJ/mol	Joback Method
hvap	64.78	kJ/mol	Joback Method
log10ws	-1.06		Crippen Method
logp	1.062		Crippen Method
mcvol	106.810	ml/mol	McGowan Method
pc	3901.37	kPa	Joback Method
tb	591.83	K	Joback Method
tc	751.66	K	Joback Method
tf	378.41	K	Joback Method
vc	0.441	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	294.38	J/mol×K	591.83	Joback Method
cpg	299.61	J/mol×K	618.47	Joback Method
cpg	304.36	J/mol×K	645.11	Joback Method
cpg	308.68	J/mol×K	671.75	Joback Method
cpg	312.60	J/mol×K	698.39	Joback Method
cpg	316.15	J/mol×K	725.03	Joback Method

cpg	319.37	J/mol×K	751.66	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	409.00 ± 2.00	K	0.40	NIST Webbook

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=C376738&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
tbrp: Boiling point at reduced pressure
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.