

Glutaric acid, 2,2,2-trifluoroethyl pentadecyl ester

Inchi:	InChI=1S/C22H39F3O4/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-18-28-20(26)16-15-17-21(27)
InchiKey:	MBANVJJXQLOUSK-UHFFFAOYSA-N
Formula:	C22H39F3O4
SMILES:	CCCCCCCCCCCCCCCCOC(=O)CCCC(=O)OCC(F)(F)F
Mol. weight [g/mol]:	424.54

Physical Properties

Property code	Value	Unit	Source
gf	-915.07	kJ/mol	Joback Method
hf	-1584.09	kJ/mol	Joback Method
hfus	60.14	kJ/mol	Joback Method
hvap	79.13	kJ/mol	Joback Method
log10ws	-7.42		Crippen Method
logp	6.897		Crippen Method
mcvol	341.030	ml/mol	McGowan Method
pc	888.94	kPa	Joback Method
rinpol	2404.00		NIST Webbook
rinpol	2404.00		NIST Webbook
tb	849.92	K	Joback Method
tc	1041.12	K	Joback Method
tf	486.21	K	Joback Method
vc	1.359	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1114.30	J/molxK	849.92	Joback Method
cpg	1132.90	J/molxK	881.79	Joback Method
cpg	1150.34	J/molxK	913.65	Joback Method
cpg	1166.65	J/molxK	945.52	Joback Method
cpg	1181.88	J/molxK	977.39	Joback Method
cpg	1196.06	J/molxK	1009.26	Joback Method
cpg	1209.24	J/molxK	1041.12	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.cheméo.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=U380522&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
hvp:	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
rinp:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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