Glutaric acid, 2,2,3,3-tetrafluoropropyl 2-decyl ester

Inchi: InChI=1S/C18H30F4O4/c1-3-4-5-6-7-8-10-14(2)26-16(24)12-9-11-15(23)25-13-18(21,22

InchiKey: LZFNUPFRMDDGQV-UHFFFAOYSA-N

Formula: C18H30F4O4

SMILES: CCCCCCCCC(C)OC(=O)CCCC(=O)OCC(F)(F)C(F)F

Mol. weight [g/mol]: 386.42

Physical Properties

Property code	Value	Unit	Source
gf	-1148.44	kJ/mol	Joback Method
hf	-1708.20	kJ/mol	Joback Method
hfus	45.81	kJ/mol	Joback Method
hvap	68.63	kJ/mol	Joback Method
log10ws	-5.82		Crippen Method
logp	5.283		Crippen Method
mcvol	286.440	ml/mol	McGowan Method
pc	1111.85	kPa	Joback Method
rinpol	1912.00		NIST Webbook
rinpol	1912.00		NIST Webbook
tb	756.79	K	Joback Method
tc	929.71	K	Joback Method
tf	411.72	K	Joback Method
vc	1.141	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	882.44	J/mol×K	756.79	Joback Method
cpg	898.80	J/mol×K	785.61	Joback Method
cpg	914.25	J/mol×K	814.43	Joback Method
cpg	928.83	J/mol×K	843.25	Joback Method
cpg	942.56	J/mol×K	872.07	Joback Method
cpg	955.46	J/mol×K	900.89	Joback Method
cpg	967.55	J/mol×K	929.71	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U393503&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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume