

4-Fluoro-2-trifluoromethylbenzoic acid, 4-tridecyl ester

Inchi:	InChI=1S/C21H30F4O2/c1-3-5-6-7-8-9-10-12-17(11-4-2)27-20(26)18-14-13-16(22)15-19
InchiKey:	ZZJYLJTNHNETM-UHFFFAOYSA-N
Formula:	C21H30F4O2
SMILES:	CCCCCCCCC(CCC)OC(=O)c1ccc(F)cc1C(F)(F)F
Mol. weight [g/mol]:	390.46

Physical Properties

Property code	Value	Unit	Source
gf	-793.67	kJ/mol	Joback Method
hf	-1306.45	kJ/mol	Joback Method
hfus	47.58	kJ/mol	Joback Method
hvap	70.14	kJ/mol	Joback Method
log10ws	-8.28		Crippen Method
logp	7.311		Crippen Method
mvol	297.510	ml/mol	McGowan Method
pc	1082.06	kPa	Joback Method
rinpol	2090.00		NIST Webbook
rinpol	2090.00		NIST Webbook
tb	786.22	K	Joback Method
tc	969.32	K	Joback Method
tf	439.83	K	Joback Method
vc	1.183	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	916.79	J/molxK	786.22	Joback Method
cpg	933.69	J/molxK	816.74	Joback Method
cpg	949.60	J/molxK	847.25	Joback Method
cpg	964.57	J/molxK	877.77	Joback Method
cpg	978.65	J/molxK	908.29	Joback Method
cpg	991.86	J/molxK	938.80	Joback Method
cpg	1004.26	J/molxK	969.32	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U338497&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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
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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