

2-[2-(2-Methoxyethoxy)ethoxy]ethyl 2,2,3,3,3-pentafluoropropanoate

Other names: Triethylene glycol monomethyl ether, pentafluoropropionate

3,6,9-Trioxadeca-1-yl pentafluoropropionate

Inchi: InChI=1S/C10H15F5O5/c1-17-2-3-18-4-5-19-6-7-20-8(16)9(11,12)10(13,14)15/h2-7H2,1

InchiKey: AZPAOHRTQRIMLJ-UHFFFAOYSA-N

Formula: C10H15F5O5

SMILES: COCCOCCOCCOC(=O)C(F)(F)C(F)(F)F

Mol. weight [g/mol]: 310.22

Physical Properties

Property code	Value	Unit	Source
gf	-1483.97	kJ/mol	Joback Method
hf	-1889.24	kJ/mol	Joback Method
hfus	28.58	kJ/mol	Joback Method
hvap	47.56	kJ/mol	Joback Method
log10ws	-1.11		Crippen Method
logp	1.407		Crippen Method
mcvol	185.660	ml/mol	McGowan Method
pc	1780.34	kPa	Joback Method
rinpol	1238.90		NIST Webbook
rinpol	1238.90		NIST Webbook
tb	561.64	K	Joback Method
tc	716.30	K	Joback Method
tf	349.10	K	Joback Method
vc	0.742	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	493.82	J/molxK	561.64	Joback Method
cpg	506.17	J/molxK	587.42	Joback Method
cpg	518.01	J/molxK	613.19	Joback Method
cpg	529.33	J/molxK	638.97	Joback Method
cpg	540.14	J/molxK	664.75	Joback Method
cpg	550.44	J/molxK	690.53	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U351982&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

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