2-[2-[2-[2-[2-[2-[2-(2,2,2-Trifluoroacetyl)oxyethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethoxy]ethyl 2,2,2-trifluoroacetate

Other names: Heptaethylene glycol, bis(trifluoroacetate)
23,23,23-Trifluoro-22-oxo-3,6,9,12,15,18,21-heptaoxatricos-1-yl trifluoroacetate

Inchi: InChI=1S/C18H28F6O10/c19-17(20,21)15(25)33-13-11-31-9-7-29-5-3-27-1-2-28-4-6-30-

InchiKey: BIKWWTGIGYWFAV-UHFFFAOYSA-N

Formula: C18H28F6O10

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

Mol. weight [g/mol]: 518.40

Physical Properties

Property code	Value	Unit	Source
gf	-2160.34	kJ/mol	Joback Method
hf	-2891.93	kJ/mol	Joback Method
hfus	58.73	kJ/mol	Joback Method
hvap	80.94	kJ/mol	Joback Method
log10ws	-0.93		Crippen Method
logp	1.297		Crippen Method
mcvol	325.200	ml/mol	McGowan Method
pc	983.93	kPa	Joback Method
rinpol	2184.20		NIST Webbook
rinpol	2184.20		NIST Webbook
tb	887.50	K	Joback Method
tc	1093.59	K	Joback Method
tf	578.70	K	Joback Method
vc	1.286	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1076.59	J/mol×K	887.50	Joback Method
cpg	1091.49	J/mol×K	921.85	Joback Method
cpg	1104.78	J/mol×K	956.20	Joback Method
cpg	1116.44	J/mol×K	990.54	Joback Method
cpg	1126.46	J/mol×K	1024.89	Joback Method
cpg	1134.80	J/mol×K	1059.24	Joback Method

cpg	1141.47	J/mol×K	1093.59	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U351946&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