

2-[2-[2-[2-[2-(2,2,3,3,3-Pentafluoropropanoyl)oxye

Other names: 17,17,18,18-Pentafluoro-16-oxo-3,6,9,12,15-pentaoxaoctadec-1-yl pentafluoropropanoate
2,2,3,3,3-pentafluoropropanoate
Pentaethylene glycol, bis(pentafluoropropionate)

Inchi: InChI=1S/C16H20F10O8/c17-13(18,15(21,22)23)11(27)33-9-7-31-5-3-29-1-2-30-4-6-32-

InchiKey: JMRYGECVPLGRKT-UHFFFAOYSA-N

Formula: C16H20F10O8

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

Mol. weight [g/mol]: 530.31

Physical Properties

Property code	Value	Unit	Source
gf	-2740.74	kJ/mol	Joback Method
hf	-3388.15	kJ/mol	Joback Method
hfus	48.67	kJ/mol	Joback Method
hvap	65.81	kJ/mol	Joback Method
log10ws	-2.55		Crippen Method
logp	2.534		Crippen Method
mcvol	292.360	ml/mol	McGowan Method
pc	1037.90	kPa	Joback Method
rinsol	1708.90		NIST Webbook
tb	787.52	K	Joback Method
tc	964.67	K	Joback Method
tf	518.90	K	Joback Method
vc	1.188	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	934.79	J/molxK	787.52	Joback Method
cpg	948.19	J/molxK	817.05	Joback Method
cpg	960.61	J/molxK	846.57	Joback Method
cpg	972.08	J/molxK	876.10	Joback Method
cpg	982.62	J/molxK	905.62	Joback Method
cpg	992.26	J/molxK	935.15	Joback Method
cpg	1001.02	J/molxK	964.67	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U351997&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

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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