

2-(2-(2-(2-decyloxy-ethoxy)-ethoxy)-ethoxy)-ethan

Other names:
acetate

Tetraethylene glycol, decyl ether, acetate

Inchi: InChI=1S/C20H40O6/c1-3-4-5-6-7-8-9-10-11-22-12-13-23-14-15-24-16-17-25-18-19-26-2

InchiKey: BNVPLSGPAJLNJI-UHFFFAOYSA-N

Formula: C20H40O6

SMILES: CCCCCCCCCOCCOCCOCCOCCOC(C)=O

Mol. weight [g/mol]: 376.53

Physical Properties

Property code	Value	Unit	Source
gf	-536.40	kJ/mol	Joback Method
hf	-1229.81	kJ/mol	Joback Method
hfus	55.09	kJ/mol	Joback Method
hvap	78.91	kJ/mol	Joback Method
log10ws	-3.41		Crippen Method
logp	3.757		Crippen Method
mcvol	323.580	ml/mol	McGowan Method
pc	1001.44	kPa	Joback Method
rinpol	2576.80		NIST Webbook
rinpol	2576.80		NIST Webbook
tb	822.97	K	Joback Method
tc	1007.70	K	Joback Method
tf	476.24	K	Joback Method
vc	1.252	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1039.72	J/molxK	822.97	Joback Method
cpg	1058.77	J/molxK	853.76	Joback Method
cpg	1076.62	J/molxK	884.55	Joback Method
cpg	1093.25	J/molxK	915.33	Joback Method
cpg	1108.66	J/molxK	946.12	Joback Method
cpg	1122.85	J/molxK	976.91	Joback Method
cpg	1135.78	J/molxK	1007.70	Joback Method

dvisc	0.0003467	Paxs	476.24	Joback Method
dvisc	0.0001734	Paxs	534.03	Joback Method
dvisc	0.0000992	Paxs	591.82	Joback Method
dvisc	0.0000627	Paxs	649.61	Joback Method
dvisc	0.0000428	Paxs	707.39	Joback Method
dvisc	0.0000309	Paxs	765.18	Joback Method
dvisc	0.0000233	Paxs	822.97	Joback Method

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R184213&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

cpg:	Ideal gas heat capacity
dvisc:	Dynamic viscosity
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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