

Tetraethyl ethylenetetracarboxylate

Other names:	Tetraethyl ethenetetracarboxylate Tetaethylethylene tetracarboxylate Ethenetetracarboxylic acid, tetraethyl ester Tetracarbethoxyethylene Tetrakis(ethoxycarbonyl)ethylene
Inchi:	InChI=1S/C14H20O8/c1-5-19-11(15)9(12(16)20-6-2)10(13(17)21-7-3)14(18)22-8-4/h5-8H
InchiKey:	IYHFWCBVJOQIIT-UHFFFAOYSA-N
Formula:	C14H20O8
SMILES:	CCOC(=O)C(C(=O)OCC)=C(C(=O)OCC)C(=O)OCC
Mol. weight [g/mol]:	316.30
CAS:	6174-95-4

Physical Properties

Property code	Value	Unit	Source
gf	-805.56	kJ/mol	Joback Method
hf	-1213.85	kJ/mol	Joback Method
hfus	40.75	kJ/mol	Joback Method
hvap	83.50	kJ/mol	Joback Method
log10ws	-0.99		Crippen Method
logp	0.535		Crippen Method
mcvol	233.580	ml/mol	McGowan Method
pc	1864.33	kPa	Joback Method
tb	828.80	K	Joback Method
tc	1029.36	K	Joback Method
tf	503.18	K	Joback Method
vc	0.897	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	688.59	J/molxK	828.80	Joback Method
cpg	700.76	J/molxK	862.23	Joback Method
cpg	711.96	J/molxK	895.65	Joback Method
cpg	722.17	J/molxK	929.08	Joback Method

cpg	731.40	J/mol×K	962.50	Joback Method
cpg	739.62	J/mol×K	995.93	Joback Method
cpg	746.83	J/mol×K	1029.36	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C6174954&Units=SI

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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