Tetraethylpyromellitate

Inchi: InChI=1S/C18H22O8/c1-5-23-15(19)11-9-13(17(21)25-7-3)14(18(22)26-8-4)10-12(11)16
InchiKey: FRBIXZIRQKZWGN-UHFFFAOYSA-N
Formula: C18H22O8
SMILES: CCOC(=O)c1cc(C(=O)OCC)c(C(=O)OCC)cc1C(=O)OCC
Mol. weight [g/mol]: 366.36
CAS: 6634-01-1

Physical Properties

Property code	Value	Unit	Source
chs	-8644.40 ± 2.70	kJ/mol	NIST Webbook
gf	-751.48	kJ/mol	Joback Method
hf	-1476.00 ± 6.00	kJ/mol	NIST Webbook
hf	-1479.30	kJ/mol	NIST Webbook
hfs	-1579.60 ± 2.70	kJ/mol	NIST Webbook
hfs	-1582.90 ± 2.70	kJ/mol	NIST Webbook
hfus	46.40	kJ/mol	Joback Method
hsub	103.60	kJ/mol	NIST Webbook
hvap	96.55	kJ/mol	Joback Method
log10ws	-4.12		Crippen Method
logp	2.393		Crippen Method
mcvol	270.480	ml/mol	McGowan Method
pc	1631.17	kPa	Joback Method
tb	958.02	K	Joback Method
tc	1177.69	K	Joback Method
tf	645.24	K	Joback Method
vc	1.032	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	838.75	J/mol×K	958.02	Joback Method
cpg	874.52	J/mol×K	1141.07	Joback Method
cpg	870.54	J/mol×K	1104.46	Joback Method
cpg	864.94	J/mol×K	1067.85	Joback Method

cpg	857.76	J/mol×K	1031.24	Joback Method
cpg	849.02	J/mol×K	994.63	Joback Method
cpg	876.85	J/mol×K	1177.69	Joback Method
dvisc	0.0000385	Pa×s	958.02	Joback Method
dvisc	0.0000471	Pa×s	905.89	Joback Method
dvisc	0.0000591	Pa×s	853.76	Joback Method
dvisc	0.0000763	Pa×s	801.63	Joback Method
dvisc	0.0001021	Pa×s	749.50	Joback Method
dvisc	0.0001427	Pa×s	697.37	Joback Method
dvisc	0.0002105	Pa×s	645.24	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6634011&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

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfs: Solid phase enthalpy of formation at standard conditions
hfus: Enthalpy of fusion at standard conditions
hsub: Enthalpy of sublimation 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