1,2,3,5-Benzenetetracarboxylic acid, tetramethyl ester

Other names: 1,2,3,5-Tetracarbomethoxybenzene
Inchi: InChI=1S/C14H14O8/c1-19-11(15)7-5-8(12(16)20-2)10(14(18)22-4)9(6-7)13(17)21-3/h5-
InchiKey: RVSRYSJPDKQMMZ-UHFFFAOYSA-N
Formula: C14H14O8
SMILES: COC(=O)c1cc(C(=O)OC)c(C(=O)OC)c(C(=O)OC)c1
Mol. weight [g/mol]: 310.26
CAS: 3034-97-7

Physical Properties

Property code	Value	Unit	Source
gf	-785.16	kJ/mol	Joback Method
hf	-1109.37	kJ/mol	Joback Method
hfus	36.04	kJ/mol	Joback Method
hvap	87.64	kJ/mol	Joback Method
log10ws	-2.44		Crippen Method
logp	0.833		Crippen Method
mcvol	214.120	ml/mol	McGowan Method
pc	2284.95	kPa	Joback Method
rinpol	2131.00		NIST Webbook
tb	866.50	K	Joback Method
tc	1084.43	K	Joback Method
tf	389.20 ± 0.10	K	NIST Webbook
vc	0.807	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	654.42	J/mol×K	1084.43	Joback Method
cpg	650.85	J/mol×K	1048.11	Joback Method
cpg	645.92	J/mol×K	1011.79	Joback Method
cpg	639.66	J/mol×K	975.46	Joback Method
cpg	632.12	J/mol×K	939.14	Joback Method
cpg	623.34	J/mol×K	902.82	Joback Method
cpg	613.37	J/mol×K	866.50	Joback Method

dvisc	0.0003119	Pa×s	600.16	Joback Method
dvisc	0.0000677	Pa×s	866.50	Joback Method
dvisc	0.0000816	Pa×s	822.11	Joback Method
dvisc	0.0001003	Pa×s	777.72	Joback Method
dvisc	0.0001265	Pa×s	733.33	Joback Method
dvisc	0.0001644	Pa×s	688.94	Joback Method
dvisc	0.0002215	Pa×s	644.55	Joback Method
hfust	32.60	kJ/mol	389.20	NIST Webbook

Sources

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=C3034977&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
hfust: Enthalpy of fusion at a given temperature
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