Pyromellitic dianhydride

Other names:	1,2,4,5-Benzenetetracarboxylic anhydride
	1,2,4,5-Benzenetetracarboxylic dianhydride
	1,2,4,5-benzenetetracarboxylic 1,2:4,5-dianhydride
	1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone
	Benzene-1,2:4,5-tetracarboxylic dianhydride
	NSC 4798
	Pyromellitic 1,2:4,5-dianhydride
	Pyromellitic acid anhydride
	Pyromellitic acid dianhydride
	pyromellitic anhydride
Inchi:	InChI=1S/C10H2O6/c11-7-3-1-4-6(10(14)16-8(4)12)2-5(3)9(13)15-7/h1-2H
InchiKey:	ANSXAPJVJOKRDJ-UHFFFAOYSA-N
Formula:	C10H2O6
SMILES:	O=c1oc(=O)c2cc3c(=O)oc(=O)c3cc12
Mol. weight [g/mol]:	218.12
CAS:	89-32-7

Physical Properties

Property code	Value	Unit	Source
chs	-3267.00 ± 1.00	kJ/mol	NIST Webbook
chs	-3312.70 ± 9.10	kJ/mol	NIST Webbook
hfs	-953.50	kJ/mol	NIST Webbook
hfs	-1047.00	kJ/mol	NIST Webbook
hfs	-907.34	kJ/mol	NIST Webbook
hsub	122.30 ± 2.40	kJ/mol	NIST Webbook
hsub	83.39	kJ/mol	NIST Webbook
ie	12.19 ± 0.02	eV	NIST Webbook
log10ws	-9.07		Crippen Method
logp	-0.505		Crippen Method
mcvol	124.300	ml/mol	McGowan Method
ss	237.10	J/mol×K	NIST Webbook
ss	236.50	J/mol×K	NIST Webbook
ss	242.10	J/mol×K	NIST Webbook
tb	671.70	K	NIST Webbook
tt	558.90 ± 2.00	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cps	215.70	J/mol×K	298.15	NIST Webbook
cps	231.40	J/mol×K	298.15	NIST Webbook
cps	219.90	J/mol×K	300.00	NIST Webbook
cps	219.90	J/mol×K	300.00	NIST Webbook
hfust	15.82	kJ/mol	557.20	NIST Webbook
hfust	32.39	kJ/mol	558.90	NIST Webbook
hfust	15.83	kJ/mol	557.15	NIST Webbook
hsubt	100.40	kJ/mol	559.00	NIST Webbook
hvapt	79.60	kJ/mol	653.00	NIST Webbook
sfust	28.40	J/mol×K	557.15	NIST Webbook

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Measurement and prediction of the solubilities of aromatic polyimide monomers in supercritical carbon dioxide with acetone:	https://www.doi.org/10.1016/j.jct.2012.04.013
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C89327&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

chs:	Standard solid enthalpy of combustion
cps:	Solid phase heat capacity
hfs:	Solid phase enthalpy of formation at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
sfust:	Entropy of fusion at a given temperature

ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tt:	Triple Point Temperature