1,3-Cyclopentanedicarboxylic acid, 1,2,2-trimethyl-, (1R-cis)-

Other names: (+)-Camphoric acid
D-Camphoric acid
Dextro-camphoric acid

Inchi: InChI=1S/C10H16O4/c1-9(2)6(7(11)12)4-5-10(9,3)8(13)14/h6H,4-5H2,1-3H3,(H,11,12)(H

InchiKey: LSPHULWDVZXLIL-UHFFFAOYSA-N

Formula: C10H16O4

SMILES: CC1(C(=O)O)CCC(C(=O)O)C1(C)C

Mol. weight [g/mol]: 200.23

CAS: 124-83-4

Physical Properties

Property code	Value	Unit	Source
gf	-488.01	kJ/mol	Joback Method
hf	-729.07	kJ/mol	Joback Method
hfus	16.51	kJ/mol	Joback Method
hvap	82.04	kJ/mol	Joback Method
log10ws	-1.42		Aqueous Solubility Prediction Method
logp	1.598		Crippen Method
mcvol	155.780	ml/mol	McGowan Method
pc	3611.55	kPa	Joback Method
tb	726.72	K	Joback Method
tc	924.53	K	Joback Method
tf	460.85	K	Aqueous Solubility Prediction Method
vc	0.581	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	459.68	J/mol×K	726.72	Joback Method
cpg	471.32	J/mol×K	759.69	Joback Method
cpg	482.85	J/mol×K	792.66	Joback Method
cpg	494.40	J/mol×K	825.63	Joback Method

cpg	506.12	J/mol×K	858.59	Joback Method
cpg	518.17	J/mol×K	891.56	Joback Method
cpg	530.68	J/mol×K	924.53	Joback Method

Sources

Aqueous Solubility Prediction Method: http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C124834&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Joback Method: https://en.wikipedia.org/wiki/Joback_method

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