p-Methylcinnamic acid

Other names:	4-Methylcinnamic acid
	2-Propenoic acid, 3-(4-methylphenyl)-
	Cinnamic acid, p-methyl-
	trans-p-methylcinnamic acid
Inchi:	InChI=1S/C10H10O2/c1-8-2-4-9(5-3-8)6-7-10(11)12/h2-7H,1H3,(H,11,12)/b7-6+
InchiKey:	RURHILYUWQEGOS-VOTSOKGWSA-N
Formula:	C10H10O2
SMILES:	Cc1ccc(C=CC(=O)O)cc1
Mol. weight [g/mol]:	162.19
CAS:	1866-39-3

Physical Properties

Property code	Value	Unit	Source
gf	-49.42	kJ/mol	Joback Method
hf	-172.26	kJ/mol	Joback Method
hfus	21.20	kJ/mol	Joback Method
hvap	64.18	kJ/mol	Joback Method
log10ws	-2.29		Crippen Method
logp	2.093		Crippen Method
mcvol	131.140	ml/mol	McGowan Method
pc	3650.93	kPa	Joback Method
tb	610.07	K	Joback Method
tc	819.56	K	Joback Method
tf	347.07	K	Joback Method
vc	0.492	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	305.72	J/mol×K	610.07	Joback Method
cpg	351.51	J/mol×K	784.64	Joback Method
cpg	343.54	J/mol×K	749.73	Joback Method
cpg	335.02	J/mol×K	714.81	Joback Method
cpg	325.90	J/mol×K	679.90	Joback Method

cpg	316.15	J/mol×K	644.98	Joback Method
cpg	358.96	J/mol×K	819.56	Joback Method
dvisc	0.0000748	Pa×s	610.07	Joback Method
dvisc	0.0001119	Pa×s	566.24	Joback Method
dvisc	0.0001792	Pa×s	522.40	Joback Method
dvisc	0.0003127	Pa×s	478.57	Joback Method
dvisc	0.0006105	Pa×s	434.74	Joback Method
dvisc	0.0013852	Pa×s	390.90	Joback Method
dvisc	0.0038653	Pa×s	347.07	Joback Method

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=C1866393&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
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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