2-Propenoic acid, 3-(4-methoxyphenyl)-

Other names:	4-Methoxycinnamic acid
	p-Methoxycinnamic acid
	Cinnamic acid, p-methoxy-
	Cinnamic acid, 4-methoxy-
	Methoxycinnamic acid, para
	O-Methyl-p-coumaric acid
	3-(4-Methoxy-phenyl)-acrylic acid
	3-(4-Methoxyphenyl)-2-propenoic acid
	NSC 5303
	trans-4-methoxycinnamic acid
Inchi:	InChI=1S/C10H10O3/c1-13-9-5-2-8(3-6-9)4-7-10(11)12/h2-7H,1H3,(H,11,12)/b7-4+
InchiKey:	AFDXODALSZRGIH-QPJJXVBHSA-N
Formula:	C10H10O3
SMILES:	COc1ccc(C=CC(=O)O)cc1
Mol. weight [g/mol]:	178.18
CAS:	830-09-1

Physical Properties

Property code	Value	Unit	Source
chs	-4878.10	kJ/mol	NIST Webbook
chs	-4871.00	kJ/mol	NIST Webbook
gf	-154.42	kJ/mol	Joback Method
hf	-304.48	kJ/mol	Joback Method
hfs	-485.80	kJ/mol	NIST Webbook
hfus	22.39	kJ/mol	Joback Method
hvap	66.59	kJ/mol	Joback Method
log10ws	-1.93		Crippen Method
logp	1.793		Crippen Method
mcvol	137.010	ml/mol	McGowan Method
pc	3577.07	kPa	Joback Method
tb	632.49	K	Joback Method
tc	839.79	K	Joback Method
tf	412.00 ± 3.00	K	NIST Webbook
vc	0.510	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	328.56	J/mol×K	632.49	Joback Method
cpg	338.85	J/mol×K	667.04	Joback Method
cpg	348.51	J/mol×K	701.59	Joback Method
cpg	357.56	J/mol×K	736.14	Joback Method
cpg	366.02	J/mol×K	770.69	Joback Method
cpg	373.93	J/mol×K	805.24	Joback Method
cpg	381.31	J/mol×K	839.79	Joback Method
dvisc	0.0023160	Pa×s	369.30	Joback Method
dvisc	0.0008973	Pa×s	413.17	Joback Method
dvisc	0.0004170	Pa×s	457.03	Joback Method
dvisc	0.0002217	Pa×s	500.89	Joback Method
dvisc	0.0001304	Pa×s	544.76	Joback Method
dvisc	0.0000831	Pa×s	588.62	Joback Method
dvisc	0.0000563	Pa×s	632.49	Joback Method
hfust	2.49	kJ/mol	461.90	NIST Webbook

Sources

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=C830091&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

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

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume