4-Methylcinnamaldehyde

Inchi: InChI=1S/C10H10O/c1-9-4-6-10(7-5-9)3-2-8-11/h2-8H,1H3/b3-2+
InchiKey: DKOUYOVAEBQFHU-NSCUHMNNSA-N
Formula: C10H10O
SMILES: Cc1ccc(C=CC=O)cc1
Mol. weight [g/mol]: 146.19
CAS: 71277-10-6

Physical Properties

Property code	Value	Unit	Source
gf	116.80	kJ/mol	Joback Method
hf	6.97	kJ/mol	Joback Method
hfus	17.80	kJ/mol	Joback Method
hvap	47.47	kJ/mol	Joback Method
log10ws	-2.47		Crippen Method
logp	2.207		Crippen Method
mcvol	125.270	ml/mol	McGowan Method
pc	3318.18	kPa	Joback Method
rinpol	200.50		NIST Webbook
tb	512.68	K	Joback Method
tc	733.50	K	Joback Method
tf	278.32	K	Joback Method
vc	0.484	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	259.86	J/mol×K	512.68	Joback Method
cpg	315.28	J/mol×K	696.70	Joback Method
cpg	305.68	J/mol×K	659.89	Joback Method
cpg	295.38	J/mol×K	623.09	Joback Method
cpg	284.34	J/mol×K	586.29	Joback Method
cpg	272.52	J/mol×K	549.48	Joback Method
cpg	324.23	J/mol×K	733.50	Joback Method
dvisc	0.0002293	Pa×s	512.68	Joback Method

dvisc	0.0002874	Pa×s	473.62	Joback Method
dvisc	0.0003751	Pa×s	434.56	Joback Method
dvisc	0.0005159	Pa×s	395.50	Joback Method
dvisc	0.0007611	Pa×s	356.44	Joback Method
dvisc	0.0012355	Pa×s	317.38	Joback Method
dvisc	0.0022976	Pa×s	278.32	Joback Method

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=C71277106&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume