Cinnamaldehyde, (E)-

Other names:	(E)-Cinnamaldehyde trans-Cinnamaldehyde trans-Cinnamic aldehyde trans-Cinnamylaldehyde (E)-3-Phenylpropenal 2-Propenal, 3-phenyl-, (E)- (2E)-3-Phenyl-2-propenal (E)-Cinnamic aldehyde 2-Propenal, 3-phenyl-, (2E)- Cinnamaldehyde
Inchi:	InChI=1S/C9H8O/c10-8-4-7-9-5-2-1-3-6-9/h1-8H/b7-4+
InchiKey:	KJPRLNWUNMBNBZ-QPJJXVBHSA-N
Formula:	C9H8O
SMILES:	O=CC=Cc1ccccc1
Mol. weight [g/mol]:	132.16
CAS:	14371-10-9

Physical Properties

Property code	Value	Unit	Source
gf	118.01	kJ/mol	Joback Method
hf	39.08	kJ/mol	Joback Method
hfus	15.60	kJ/mol	Joback Method
hvap	44.58	kJ/mol	Joback Method
log10ws	-1.99		Crippen Method
logp	1.899		Crippen Method
mcvol	111.180	ml/mol	McGowan Method
pc	3786.98	kPa	Joback Method
rinpol	1270.00		NIST Webbook
rinpol	1257.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1227.00		NIST Webbook
rinpol	1277.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1275.00		NIST Webbook
rinpol	1270.00		NIST Webbook
rinpol	1271.00		NIST Webbook

rinpol	1253.00		NIST Webbook
rinpol	1228.00		NIST Webbook
rinpol	1224.00		NIST Webbook
rinpol	1222.00		NIST Webbook
rinpol	1268.00		NIST Webbook
rinpol	1287.00		NIST Webbook
rinpol	1287.00		NIST Webbook
rinpol	1256.00		NIST Webbook
rinpol	1268.00		NIST Webbook
rinpol	1268.00		NIST Webbook
rinpol	1256.00		NIST Webbook
rinpol	1243.00		NIST Webbook
rinpol	1235.00		NIST Webbook
rinpol	1240.00		NIST Webbook
rinpol	1268.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1239.00		NIST Webbook
rinpol	1240.00		NIST Webbook
rinpol	1225.00		NIST Webbook
rinpol	1274.00		NIST Webbook
rinpol	1273.00		NIST Webbook
rinpol	1224.00		NIST Webbook
rinpol	1272.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1283.00		NIST Webbook
rinpol	1266.00		NIST Webbook
rinpol	1270.00		NIST Webbook
rinpol	1235.10		NIST Webbook
rinpol	1270.00		NIST Webbook
ripol	2025.00		NIST Webbook
ripol	2032.00		NIST Webbook
ripol	2015.00		NIST Webbook
ripol	2084.00		NIST Webbook
ripol	2040.00		NIST Webbook
ripol	2025.00		NIST Webbook
ripol	2044.00		NIST Webbook
ripol	2043.00		NIST Webbook
tb	521.20	K	NIST Webbook
tc	708.10	K	Joback Method
tf	254.53	K	Joback Method
vc	0.428	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	217.59	J/mol×K	484.82	Joback Method
cpg	229.63	J/mol×K	522.03	Joback Method
cpg	240.80	J/mol×K	559.25	Joback Method
cpg	251.16	J/mol×K	596.46	Joback Method
cpg	260.75	J/mol×K	633.68	Joback Method
cpg	269.63	J/mol×K	670.89	Joback Method
cpg	277.85	J/mol×K	708.10	Joback Method
dvisc	0.0031225	Pa×s	254.53	Joback Method
dvisc	0.0015502	Pa×s	292.91	Joback Method
dvisc	0.0009052	Pa×s	331.29	Joback Method
dvisc	0.0005911	Pa×s	369.68	Joback Method
dvisc	0.0004181	Pa×s	408.06	Joback Method
dvisc	0.0003140	Pa×s	446.44	Joback Method
dvisc	0.0002467	Pa×s	484.82	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=C14371109&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
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume