Phenol, 2,3,4,6-tetramethyl-

Other names: 2,3,4,6-Tetramethylphenol
Inchi: InChI=1S/C10H14O/c1-6-5-7(2)10(11)9(4)8(6)3/h5,11H,1-4H3
InchiKey: WEJVHFVGNQBRGH-UHFFFAOYSA-N
Formula: C10H14O
SMILES: Cc1cc(C)c(O)c(C)c1C
Mol. weight [g/mol]: 150.22
CAS: 3238-38-8

Physical Properties

Property code	Value	Unit	Source
gf	-37.78	kJ/mol	Joback Method
hf	-224.92	kJ/mol	Joback Method
hfus	20.31	kJ/mol	Joback Method
hvap	55.13	kJ/mol	Joback Method
log10ws	-2.92		Crippen Method
logp	2.626		Crippen Method
mcvol	133.870	ml/mol	McGowan Method
pc	3291.59	kPa	Joback Method
tb	523.15 ± 4.00	K	NIST Webbook
tb	523.15 ± 4.00	K	NIST Webbook
tc	772.15	K	Joback Method
tf	353.15 ± 2.00	K	NIST Webbook
vc	0.454	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	310.51	J/mol×K	550.44	Joback Method
cpg	367.86	J/mol×K	735.20	Joback Method
cpg	357.63	J/mol×K	698.25	Joback Method
cpg	346.83	J/mol×K	661.30	Joback Method
cpg	335.42	J/mol×K	624.34	Joback Method
cpg	323.33	J/mol×K	587.39	Joback Method
cpg	377.60	J/mol×K	772.15	Joback Method

dvisc	0.0000501	Pa×s	550.44	Joback Method
dvisc	0.0000722	Pa×s	521.73	Joback Method
dvisc	0.0001084	Pa×s	493.01	Joback Method
dvisc	0.0001712	Pa×s	464.30	Joback Method
dvisc	0.0002873	Pa×s	435.59	Joback Method
dvisc	0.0005185	Pa×s	406.87	Joback Method
dvisc	0.0010235	Pa×s	378.16	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54577e+01
Coeff. B	-4.73206e+03
Coeff. C	-8.65860e+01
Temperature range (K), min.	398.52
Temperature range (K), max.	552.97

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

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=C3238388&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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