Phenol, 3,5-diethyl-

Other names:	3,5-Diethylphenol
Inchi:	InChI=1S/C10H14O/c1-3-8-5-9(4-2)7-10(11)6-8/h5-7,11H,3-4H2,1-2H3
InchiKey:	LPCJHUPMQKSPDC-UHFFFAOYSA-N
Formula:	C10H14O
SMILES:	CCc1cc(O)cc(CC)c1
Mol. weight [g/mol]:	150.22
CAS:	1197-34-8

Physical Properties

Property code	Value	Unit	Source
gf	-18.52	kJ/mol	Joback Method
hf	-201.98	kJ/mol	Joback Method
hfus	21.09	kJ/mol	Joback Method
hvap	53.81	kJ/mol	Joback Method
log10ws	-2.63		Crippen Method
logp	2.517		Crippen Method
mcvol	133.870	ml/mol	McGowan Method
pc	3407.89	kPa	Joback Method
ripol	2256.00		NIST Webbook
tb	540.48	K	Joback Method
tc	759.98	K	Joback Method
tf	349.65 ± 3.00	K	NIST Webbook
tf	349.15 ± 2.00	K	NIST Webbook
tf	350.15 ± 2.00	K	NIST Webbook
tf	349.15 ± 2.00	K	NIST Webbook
tf	350.15 ± 2.00	K	NIST Webbook
tf	347.95 ± 2.00	K	NIST Webbook
tf	349.40 ± 2.00	K	NIST Webbook
tf	349.15 ± 2.00	K	NIST Webbook
tf	349.15 ± 2.00	K	NIST Webbook
vc	0.454	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	380.67	J/mol×K	759.98	Joback Method
cpg	370.79	J/mol×K	723.39	Joback Method
cpg	360.34	J/mol×K	686.81	Joback Method
cpg	349.24	J/mol×K	650.23	Joback Method
cpg	337.41	J/mol×K	613.65	Joback Method
cpg	324.79	J/mol×K	577.06	Joback Method
cpg	311.31	J/mol×K	540.48	Joback Method
dvisc	0.0022455	Pa×s	353.12	Joback Method
dvisc	0.0000567	Pa×s	540.48	Joback Method
dvisc	0.0000868	Pa×s	509.25	Joback Method
dvisc	0.0001403	Pa×s	478.03	Joback Method
dvisc	0.0002427	Pa×s	446.80	Joback Method
dvisc	0.0004558	Pa×s	415.57	Joback Method
dvisc	0.0009482	Pa×s	384.35	Joback Method
hvapt	54.30	kJ/mol	454.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.54562e+01
Coeff. B	-4.71576e+03
Coeff. C	-8.60300e+01
Temperature range (K), min.	396.92
Temperature range (K), max.	550.88

Sources

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

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=C1197348&Units=SI

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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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