Benzene, 1-ethyl-2,3,4,5-tetramethyl

Inchi: InChI=1S/C12H18/c1-6-12-7-8(2)9(3)10(4)11(12)5/h7H,6H2,1-5H3
InchiKey: UCVPNSFREXDFFW-UHFFFAOYSA-N
Formula: C12H18
SMILES: CCc1cc(C)c(C)c(C)c1C
Mol. weight [g/mol]: 162.27

Physical Properties

Property code	Value	Unit	Source
gf	124.05	kJ/mol	Joback Method
hf	-100.36	kJ/mol	Joback Method
hfus	19.32	kJ/mol	Joback Method
hvap	47.23	kJ/mol	Joback Method
log10ws	-4.18		Crippen Method
logp	3.483		Crippen Method
mcvol	156.180	ml/mol	McGowan Method
pc	2269.73	kPa	Joback Method
rinpol	1344.00		NIST Webbook
rinpol	1344.00		NIST Webbook
tb	520.56	K	Joback Method
tc	724.42	K	Joback Method
tf	301.50	K	Joback Method
vc	0.600	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	347.65	J/mol×K	520.56	Joback Method
cpg	418.30	J/mol×K	690.44	Joback Method
cpg	405.49	J/mol×K	656.47	Joback Method
cpg	392.03	J/mol×K	622.49	Joback Method
cpg	377.91	J/mol×K	588.51	Joback Method
cpg	363.12	J/mol×K	554.54	Joback Method
cpg	430.49	J/mol×K	724.42	Joback Method
dvisc	0.0001820	Pa×s	520.56	Joback Method

dvisc	0.0002187	Pa×s	484.05	Joback Method
dvisc	0.0002709	Pa×s	447.54	Joback Method
dvisc	0.0003485	Pa×s	411.03	Joback Method
dvisc	0.0004708	Pa×s	374.52	Joback Method
dvisc	0.0006788	Pa×s	338.01	Joback Method
dvisc	0.0010695	Pa×s	301.50	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R52961&Units=SI
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

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