Benzene, 1-(1-ethylpropyl)-4-methyl-

Other names:	Toluene, p-(1-ethylpropyl)-
	1-(1-Ethylpropyl)-4-methylbenzene
	3-(4-Tolyl)-pentane
	Pentane, 3-(4-tolyl)
Inchi:	InChI=1S/C12H18/c1-4-11(5-2)12-8-6-10(3)7-9-12/h6-9,11H,4-5H2,1-3H3
InchiKey:	HFPPJNVUPMBSBN-UHFFFAOYSA-N
Formula:	C12H18
SMILES:	CCC(CC)c1ccc(C)cc1
Mol. weight [g/mol]:	162.27
CAS:	22975-58-2

Physical Properties

Property code	Value	Unit	Source
gf	150.50	kJ/mol	Joback Method
hf	-71.23	kJ/mol	Joback Method
hfus	16.96	kJ/mol	Joback Method
hvap	44.86	kJ/mol	Joback Method
log10ws	-3.97		Crippen Method
logp	3.899		Crippen Method
mcvol	156.180	ml/mol	McGowan Method
pc	2388.85	kPa	Joback Method
ripol	1371.20		NIST Webbook
ripol	1371.00		NIST Webbook
ripol	1371.20		NIST Webbook
tb	505.18	K	Joback Method
tc	710.08	K	Joback Method
tf	248.94	K	Joback Method
vc	0.594	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	346.40	J/mol×K	505.18	Joback Method
cpg	363.34	J/mol×K	539.33	Joback Method

cpg	379.40	J/mol×K	573.48	Joback Method
cpg	394.59	J/mol×K	607.63	Joback Method
cpg	408.95	J/mol×K	641.78	Joback Method
cpg	422.51	J/mol×K	675.93	Joback Method
cpg	435.30	J/mol×K	710.08	Joback Method
dvisc	0.0037035	Pa×s	248.94	Joback Method
dvisc	0.0015687	Pa×s	291.65	Joback Method
dvisc	0.0008275	Pa×s	334.35	Joback Method
dvisc	0.0005046	Pa×s	377.06	Joback Method
dvisc	0.0003403	Pa×s	419.77	Joback Method
dvisc	0.0002468	Pa×s	462.47	Joback Method
dvisc	0.0001890	Pa×s	505.18	Joback Method

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=C22975582&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
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
pc: Critical Pressure
ripol: Polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume