Benzene, (1,3-dimethylbutyl)-

Other names: 2-Methyl-4-phenylpentane
(1,3-Dimethylbutyl)benzene
2-phenyl-4-methylpentane
Inchi: InChI=1S/C12H18/c1-10(2)9-11(3)12-7-5-4-6-8-12/h4-8,10-11H,9H2,1-3H3
InchiKey: MAUAHKQOJAFLQH-UHFFFAOYSA-N
Formula: C12H18
SMILES: CC(C)CC(C)c1ccccc1
Mol. weight [g/mol]: 162.27
CAS: 19219-84-2

Physical Properties

Property code	Value	Unit	Source
gf	157.69	kJ/mol	Joback Method
hf	-65.04	kJ/mol	Joback Method
hfus	13.83	kJ/mol	Joback Method
hvap	43.81	kJ/mol	Joback Method
log10ws	-3.67		Crippen Method
logp	3.836		Crippen Method
mcvol	156.180	ml/mol	McGowan Method
pc	2443.48	kPa	Joback Method
tb	499.76	K	Joback Method
tc	708.09	K	Joback Method
tf	221.42	K	Joback Method
vc	0.588	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	345.83	J/mol×K	499.76	Joback Method
cpg	363.63	J/mol×K	534.48	Joback Method
cpg	380.42	J/mol×K	569.20	Joback Method
cpg	396.25	J/mol×K	603.93	Joback Method
cpg	411.16	J/mol×K	638.65	Joback Method
cpg	425.18	J/mol×K	673.37	Joback Method

cpg	438.35	J/mol×K	708.09	Joback Method
dvisc	0.0091404	Pa×s	221.42	Joback Method
dvisc	0.0027198	Pa×s	267.81	Joback Method
dvisc	0.0011576	Pa×s	314.20	Joback Method
dvisc	0.0006138	Pa×s	360.59	Joback Method
dvisc	0.0003761	Pa×s	406.98	Joback Method
dvisc	0.0002548	Pa×s	453.37	Joback Method
dvisc	0.0001855	Pa×s	499.76	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=C19219842&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume