Benzene, (1-butylpentyl)-

Other names: Nonane, 5-phenyl-
5-Phenylnonane
Inchi: InChI=1S/C15H24/c1-3-5-10-14(11-6-4-2)15-12-8-7-9-13-15/h7-9,12-14H,3-6,10-11H2,1-
InchiKey: ZUKGIZDDXAWABM-UHFFFAOYSA-N
Formula: C15H24
SMILES: CCCCC(CCCC)c1ccccc1
Mol. weight [g/mol]: 204.35
CAS: 20216-88-0

Physical Properties

Property code	Value	Unit	Source
gf	185.39	kJ/mol	Joback Method
hf	-121.68	kJ/mol	Joback Method
hfus	25.12	kJ/mol	Joback Method
hvap	50.87	kJ/mol	Joback Method
log10ws	-5.17		Crippen Method
logp	5.151		Crippen Method
mcvol	198.450	ml/mol	McGowan Method
pc	1859.51	kPa	Joback Method
rinpol	1437.00		NIST Webbook
rinpol	1437.00		NIST Webbook
tb	568.84	K	Joback Method
tc	764.22	K	Joback Method
tf	270.23	K	Joback Method
vc	0.761	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	492.85	J/mol×K	568.84	Joback Method
cpg	578.50	J/mol×K	731.66	Joback Method
cpg	563.24	J/mol×K	699.10	Joback Method
cpg	547.09	J/mol×K	666.53	Joback Method
cpg	530.00	J/mol×K	633.97	Joback Method

cpg	511.93	J/mol×K	601.40	Joback Method
cpg	592.90	J/mol×K	764.22	Joback Method
dvisc	0.0001551	Pa×s	568.84	Joback Method
dvisc	0.0002099	Pa×s	519.07	Joback Method
dvisc	0.0003028	Pa×s	469.30	Joback Method
dvisc	0.0004766	Pa×s	419.54	Joback Method
dvisc	0.0008475	Pa×s	369.77	Joback Method
dvisc	0.0018025	Pa×s	320.00	Joback Method
dvisc	0.0050617	Pa×s	270.23	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=C20216880&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
rinpol: Non-polar retention indices
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume