# Benzene, (1-hexyloctyl)-

**Other names:** Tetradecane, 7-phenyl-
7-Phenyltetradecane
**Inchi:** InChI=1S/C20H34/c1-3-5-7-9-12-16-19(15-11-8-6-4-2)20-17-13-10-14-18-20/h10,13-14,1
**InchiKey:** ALMICIFPGWBKNR-UHFFFAOYSA-N
**Formula:** C20H34
**SMILES:** CCCCCCCC(CCCCCC)c1ccccc1
**Mol. weight [g/mol]:** 274.48
**CAS:** 4534-54-7

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 227.49 | kJ/mol | Joback Method |
| hf | -224.88 | kJ/mol | Joback Method |
| hfus | 38.07 | kJ/mol | Joback Method |
| hvap | 62.00 | kJ/mol | Joback Method |
| log10ws | -7.26 | | Crippen Method |
| logp | 7.101 | | Crippen Method |
| mcvol | 268.900 | ml/mol | McGowan Method |
| pc | 1276.42 | kPa | Joback Method |
| tb | 683.24 | K | Joback Method |
| tc | 868.95 | K | Joback Method |
| tf | 326.58 | K | Joback Method |
| vc | 1.042 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 767.49 | J/mol×K | 683.24 | Joback Method |
| cpg | 860.06 | J/mol×K | 837.99 | Joback Method |
| cpg | 843.51 | J/mol×K | 807.04 | Joback Method |
| cpg | 826.02 | J/mol×K | 776.09 | Joback Method |
| cpg | 807.55 | J/mol×K | 745.14 | Joback Method |
| cpg | 788.06 | J/mol×K | 714.19 | Joback Method |
| cpg | 875.71 | J/mol×K | 868.95 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0000905 | Pa×s | 683.24 | Joback Method |
| dvisc | 0.0001241 | Pa×s | 623.80 | Joback Method |
| dvisc | 0.0001819 | Pa×s | 564.35 | Joback Method |
| dvisc | 0.0002918 | Pa×s | 504.91 | Joback Method |
| dvisc | 0.0005310 | Pa×s | 445.47 | Joback Method |
| dvisc | 0.0011617 | Pa×s | 386.02 | Joback Method |
| dvisc | 0.0033798 | Pa×s | 326.58 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C4534547&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

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|---|---|
| **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 |