# Heneicosane, 11-phenyl-

**Other names:** Benzene, (1-decylundecyl)-
11-Phenylheneicosane
**Inchi:** InChI=1S/C27H48/c1-3-5-7-9-11-13-15-18-22-26(27-24-20-17-21-25-27)23-19-16-14-12-
**InchiKey:** NDSAOEARRHEOPX-UHFFFAOYSA-N
**Formula:** C27H48
**SMILES:** CCCCCCCCCCC(CCCCCCCCCC)c1ccccc1
**Mol. weight [g/mol]:** 372.67
**CAS:** 6703-80-6

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 286.43 | kJ/mol | Joback Method |
| hf | -369.36 | kJ/mol | Joback Method |
| hfus | 56.20 | kJ/mol | Joback Method |
| hvap | 77.58 | kJ/mol | Joback Method |
| log10ws | -10.19 | | Crippen Method |
| logp | 9.832 | | Crippen Method |
| mcvol | 367.530 | ml/mol | McGowan Method |
| pc | 830.02 | kPa | Joback Method |
| tb | 843.40 | K | Joback Method |
| tc | 1034.84 | K | Joback Method |
| tf | 293.95 ± 0.40 | K | NIST Webbook |
| tf | 293.95 ± 0.50 | K | NIST Webbook |
| tt | 266.90 ± 0.20 | K | NIST Webbook |
| vc | 1.433 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1295.88 | J/mol×K | 1002.93 | Joback Method |
| cpg | 1312.63 | J/mol×K | 1034.84 | Joback Method |
| cpg | 1196.45 | J/mol×K | 843.40 | Joback Method |
| cpg | 1218.65 | J/mol×K | 875.31 | Joback Method |
| cpg | 1239.63 | J/mol×K | 907.21 | Joback Method |

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|---|---|---|---|---|
| cpg | 1259.45 | J/mol×K | 939.12 | Joback Method |
| cpg | 1278.18 | J/mol×K | 971.02 | Joback Method |
| dvisc | 0.0000355 | Pa×s | 843.40 | Joback Method |
| dvisc | 0.0000493 | Pa×s | 770.41 | Joback Method |
| dvisc | 0.0015021 | Pa×s | 405.47 | Joback Method |
| dvisc | 0.0005000 | Pa×s | 478.46 | Joback Method |
| dvisc | 0.0002227 | Pa×s | 551.45 | Joback Method |
| dvisc | 0.0001198 | Pa×s | 624.43 | Joback Method |
| dvisc | 0.0000734 | Pa×s | 697.42 | Joback Method |
| hfust | 64.77 | kJ/mol | 294.30 | NIST Webbook |
| hvapt | 93.50 | kJ/mol | 510.00 | NIST Webbook |

# Sources

| | |
|---|---|
| **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=C6703806&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# 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 |
| **hfust:** | Enthalpy of fusion at a given temperature |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **hvapt:** | Enthalpy of vaporization at a given temperature |
| **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 |
| **tt:** | Triple Point Temperature |

**vc:** Critical Volume