# 3,9-dimethyl-pentacosane

**Inchi:** InChI=1S/C27H56/c1-5-7-8-9-10-11-12-13-14-15-16-17-18-20-24-27(4)25-22-19-21-23-2
**InchiKey:** PCBCPCGJXAOQIU-UHFFFAOYSA-N
**Formula:** C27H56
**SMILES:** CCCCCCCCCCCCCCCCC(C)CCCCCC(C)CC
**Mol. weight [g/mol]:** 380.73

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 171.58 | kJ/mol | Joback Method |
| hf | -611.17 | kJ/mol | Joback Method |
| hfus | 58.64 | kJ/mol | Joback Method |
| hvap | 74.92 | kJ/mol | Joback Method |
| log10ws | -10.64 | | Crippen Method |
| logp | 10.491 | | Crippen Method |
| mcvol | 391.290 | ml/mol | McGowan Method |
| pc | 694.71 | kPa | Joback Method |
| rinpol | 2604.00 | | NIST Webbook |
| rinpol | 2608.00 | | NIST Webbook |
| rinpol | 2610.00 | | NIST Webbook |
| rinpol | 2607.00 | | NIST Webbook |
| rinpol | 2604.00 | | NIST Webbook |
| tb | 816.28 | K | Joback Method |
| tc | 999.37 | K | Joback Method |
| tf | 364.05 | K | Joback Method |
| vc | 1.536 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1282.57 | J/mol×K | 816.28 | Joback Method |
| cpg | 1307.23 | J/mol×K | 846.80 | Joback Method |
| cpg | 1330.65 | J/mol×K | 877.31 | Joback Method |
| cpg | 1352.88 | J/mol×K | 907.83 | Joback Method |
| cpg | 1373.98 | J/mol×K | 938.34 | Joback Method |

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|---|---|---|---|---|
| cpg | 1394.00 | J/mol×K | 968.86 | Joback Method |
| cpg | 1412.98 | J/mol×K | 999.37 | Joback Method |
| dvisc | 0.0027479 | Pa×s | 364.05 | Joback Method |
| dvisc | 0.0006915 | Pa×s | 439.42 | Joback Method |
| dvisc | 0.0002606 | Pa×s | 514.79 | Joback Method |
| dvisc | 0.0001260 | Pa×s | 590.16 | Joback Method |
| dvisc | 0.0000719 | Pa×s | 665.54 | Joback Method |
| dvisc | 0.0000459 | Pa×s | 740.91 | Joback Method |
| dvisc | 0.0000319 | Pa×s | 816.28 | Joback Method |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=R262041&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

**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