# 1-Propyldecalin, trans

**Inchi:** InChI=1S/C13H24/c1-2-6-11-8-5-9-12-7-3-4-10-13(11)12/h11-13H,2-10H2,1H3/t11?,12-,
**InchiKey:** HIXIFRGJVIZERN-VFRRUGBOSA-N
**Formula:** C13H24
**SMILES:** CCCC1CCCC2CCCCC12
**Mol. weight [g/mol]:** 180.33

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 123.97 | kJ/mol | Joback Method |
| hf | -211.03 | kJ/mol | Joback Method |
| hfus | 18.37 | kJ/mol | Joback Method |
| hvap | 44.74 | kJ/mol | Joback Method |
| log10ws | -4.33 | | Crippen Method |
| logp | 4.393 | | Crippen Method |
| mcvol | 172.310 | ml/mol | McGowan Method |
| pc | 2185.64 | kPa | Joback Method |
| rinpol | 1340.00 | | NIST Webbook |
| tb | 522.73 | K | Joback Method |
| tc | 734.35 | K | Joback Method |
| tf | 253.83 | K | Joback Method |
| vc | 0.644 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 433.98 | J/mol×K | 522.73 | Joback Method |
| cpg | 458.38 | J/mol×K | 558.00 | Joback Method |
| cpg | 481.40 | J/mol×K | 593.27 | Joback Method |
| cpg | 503.08 | J/mol×K | 628.54 | Joback Method |
| cpg | 523.47 | J/mol×K | 663.81 | Joback Method |
| cpg | 542.63 | J/mol×K | 699.08 | Joback Method |
| cpg | 560.61 | J/mol×K | 734.35 | Joback Method |
| dvisc | 0.0037366 | Pa×s | 253.83 | Joback Method |
| dvisc | 0.0019401 | Pa×s | 298.65 | Joback Method |

| | | | | |
|---|---|---|---|---|
| dvisc | 0.0011953 | Pa×s | 343.46 | Joback Method |
| dvisc | 0.0008235 | Pa×s | 388.28 | Joback Method |
| dvisc | 0.0006128 | Pa×s | 433.10 | Joback Method |
| dvisc | 0.0004821 | Pa×s | 477.91 | Joback Method |
| dvisc | 0.0003951 | Pa×s | 522.73 | Joback Method |

# Sources

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|---|---|
| **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=R578202&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |

# 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 |