# 1,14-Tetradecanediol

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|---|---|
| **Other names:** | tetradecamethylene glycol |
| | tetradecane-1,14-diol |
| **Inchi:** | InChI=1S/C14H30O2/c15-13-11-9-7-5-3-1-2-4-6-8-10-12-14-16/h15-16H,1-14H2 |
| **InchiKey:** | XLKZJJVNBQCVIX-UHFFFAOYSA-N |
| **Formula:** | C14H30O2 |
| **SMILES:** | OCCCCCCCCCCCCCCO |
| **Mol. weight [g/mol]:** | 230.39 |
| **CAS:** | 19812-64-7 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -206.64 | kJ/mol | Joback Method |
| hf | -636.75 | kJ/mol | Joback Method |
| hfus | 40.19 | kJ/mol | Joback Method |
| hvap | 80.12 | kJ/mol | Joback Method |
| log10ws | -4.21 | | Crippen Method |
| logp | 3.652 | | Crippen Method |
| mcvol | 219.860 | ml/mol | McGowan Method |
| pc | 1768.38 | kPa | Joback Method |
| rinpol | 1924.00 | | NIST Webbook |
| tb | 704.08 | K | Joback Method |
| tc | 867.15 | K | Joback Method |
| tf | 359.20 | K | Thermodynamics of fusion and sublimation for a homologous series of eleven alkane-.alpha.,.omega.-diols HO-(CH2)n-OH: Structure-related odd even effect |
| vc | 0.858 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 718.47 | J/mol×K | 839.97 | Joback Method |

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|---|---|---|---|---|
| cpg | 706.50 | J/mol×K | 812.79 | Joback Method |
| cpg | 693.98 | J/mol×K | 785.61 | Joback Method |
| cpg | 680.89 | J/mol×K | 758.44 | Joback Method |
| cpg | 667.21 | J/mol×K | 731.26 | Joback Method |
| cpg | 652.92 | J/mol×K | 704.08 | Joback Method |
| cpg | 729.92 | J/mol×K | 867.15 | Joback Method |
| dvisc | 0.0071914 | Pa×s | 369.18 | Joback Method |
| dvisc | 0.0000105 | Pa×s | 704.08 | Joback Method |
| dvisc | 0.0000195 | Pa×s | 648.26 | Joback Method |
| dvisc | 0.0000407 | Pa×s | 592.45 | Joback Method |
| dvisc | 0.0000992 | Pa×s | 536.63 | Joback Method |
| dvisc | 0.0002969 | Pa×s | 480.81 | Joback Method |
| dvisc | 0.0011853 | Pa×s | 425.00 | Joback Method |
| hfust | 61.90 | kJ/mol | 360.40 | NIST Webbook |
| hvapt | 149.70 | kJ/mol | 298.15 | Vaporization Enthalpies of the r,o-Alkanediols by Correlation Gas Chromatography |

# Correlations

| Information | Value |
|---|---|
| Property code | pvap |
| Equation | ln(Pvp) = A + B/(T + C) |
| Coeff. A | 2.49574e+01 |
| Coeff. B | -9.22020e+03 |
| Coeff. C | -1.15776e+02 |
| Temperature range (K), min. | 489.52 |
| Temperature range (K), max. | 585.09 |

# Sources

| | |
|---|---|
| **The Yaws Handbook of Vapor Pressure:** | https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Thermodynamics of fusion and sublimation for a homologous series of even-alkane-alpha,omega-diols** | https://www.doi.org/10.1016/j.jct.2013.08.019 |
| **Vaporization Enthalpies of the ro-Alkanediols by Correlation Gas Chromatography** | https://www.doi.org/10.1021/je060333x |
| **HO-(CH2)n-OH, Structure-related odd even effects.:** | https://en.wikipedia.org/wiki/Joback_method |

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C19812647&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 |
| **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 |
| **pvap:** | Vapor pressure |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |