# PENTADECANEDIOC ACID

**Other names:** Pentadecanedioic acid
**Inchi:** InChI=1S/C15H28O4/c16-14(17)12-10-8-6-4-2-1-3-5-7-9-11-13-15(18)19/h1-13H2,(H,16
**InchiKey:** BTZVDPWKGXMQFW-UHFFFAOYSA-N
**Formula:** C15H28O4
**SMILES:** O=C(O)CCCCCCCCCCCCCC(=O)O
**Mol. weight [g/mol]:** 272.38

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 1.1772 | | Cheméo Relay (1.0) |
| gf | -456.06 | kJ/mol | Joback Method |
| hf | -1022.64 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 45.98 | kJ/mol | Joback Method |
| hvap | 145.79 | kJ/mol | Cheméo Relay (1.0) |
| ie | 9.79 | eV | Cheméo Relay (1.0) |
| log10ws | -4.24 | | Cheméo Relay (1.0) |
| logp | 4.227 | | Crippen Method |
| mcvol | 237.090 | ml/mol | McGowan Method |
| pc | 1813.86 | kPa | Joback Method |
| tb | 593.32 | K | Cheméo Relay (1.0) |
| tc | 818.00 | K | Cheméo Relay (1.0) |
| tf | 399.07 | K | Cheméo Relay (1.0) |
| vc | 0.908 | m3/kmol | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 747.12 | J/mol×K | 834.70 | Joback Method |
| cpg | 815.41 | J/mol×K | 1022.11 | Joback Method |
| cpg | 805.66 | J/mol×K | 990.87 | Joback Method |
| cpg | 795.30 | J/mol×K | 959.64 | Joback Method |
| cpg | 784.30 | J/mol×K | 928.40 | Joback Method |
| cpg | 772.62 | J/mol×K | 897.17 | Joback Method |
| cpg | 760.24 | J/mol×K | 865.93 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0000306 | Pa×s | 657.50 | Joback Method |
| dvisc | 0.0000049 | Pa×s | 834.70 | Joback Method |
| dvisc | 0.0000082 | Pa×s | 775.63 | Joback Method |
| dvisc | 0.0000150 | Pa×s | 716.57 | Joback Method |
| dvisc | 0.0007293 | Pa×s | 480.31 | Joback Method |
| dvisc | 0.0000714 | Pa×s | 598.44 | Joback Method |
| dvisc | 0.0002009 | Pa×s | 539.38 | Joback Method |

# Sources

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|---|---|
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Cheméo Relay (1.0):** | |
| **Cheméo Relay (1.0, beta):** | |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C1460180&Units=SI |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |

# Legend

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|---|---|
| **af:** | Acentric Factor |
| **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 |
| **ie:** | Ionization energy |
| **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 |