# Tetracosanoic acid, propyl ester

**Other names:** propyl tetracosanoate
**Inchi:** InChI=1S/C27H54O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25
**InchiKey:** KNLZZQYOTJRNTD-UHFFFAOYSA-N
**Formula:** C27H54O2
**SMILES:** CCCCCCCCCCCCCCCCCCCCCCCC(=O)OCCC
**Mol. weight [g/mol]:** 410.72

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -57.46 | kJ/mol | Joback Method |
| hf | -845.41 | kJ/mol | Joback Method |
| hfus | 68.47 | kJ/mol | Joback Method |
| hvap | 84.85 | kJ/mol | Joback Method |
| log10ws | -9.99 | | Crippen Method |
| logp | 9.542 | | Crippen Method |
| mcvol | 398.730 | ml/mol | McGowan Method |
| pc | 705.83 | kPa | Joback Method |
| rinpol | 2877.44 | | NIST Webbook |
| rinpol | 2877.44 | | NIST Webbook |
| tb | 893.45 | K | Joback Method |
| tc | 1097.77 | K | Joback Method |
| tf | 466.21 | K | Joback Method |
| vc | 1.571 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1350.54 | J/mol×K | 893.45 | Joback Method |
| cpg | 1454.85 | J/mol×K | 1063.71 | Joback Method |
| cpg | 1436.68 | J/mol×K | 1029.66 | Joback Method |
| cpg | 1417.22 | J/mol×K | 995.61 | Joback Method |
| cpg | 1396.42 | J/mol×K | 961.56 | Joback Method |
| cpg | 1374.21 | J/mol×K | 927.50 | Joback Method |
| cpg | 1471.80 | J/mol×K | 1097.77 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0000268 | Pa×s | 893.45 | Joback Method |
| dvisc | 0.0000366 | Pa×s | 822.24 | Joback Method |
| dvisc | 0.0000530 | Pa×s | 751.04 | Joback Method |
| dvisc | 0.0000831 | Pa×s | 679.83 | Joback Method |
| dvisc | 0.0001446 | Pa×s | 608.62 | Joback Method |
| dvisc | 0.0002915 | Pa×s | 537.42 | Joback Method |
| dvisc | 0.0007281 | Pa×s | 466.21 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U405157&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

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|---|---|
| **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 |