# Sebacic acid, ethyl pentadecyl ester

**Inchi:** InChI=1S/C27H52O4/c1-3-5-6-7-8-9-10-11-12-13-16-19-22-25-31-27(29)24-21-18-15-14
**InchiKey:** GTSRNOZTCUKUIC-UHFFFAOYSA-N
**Formula:** C27H52O4
**SMILES:** CCCCCCCCCCCCCCCCOC(=O)CCCCCCCCC(=O)OCC
**Mol. weight [g/mol]:** 440.70

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -291.38 | kJ/mol | Joback Method |
| hf | -1090.21 | kJ/mol | Joback Method |
| hfus | 71.26 | kJ/mol | Joback Method |
| hvap | 94.01 | kJ/mol | Joback Method |
| log10ws | -8.85 | | Crippen Method |
| logp | 8.305 | | Crippen Method |
| mcvol | 406.170 | ml/mol | McGowan Method |
| pc | 723.40 | kPa | Joback Method |
| rinpol | 3149.00 | | NIST Webbook |
| tb | 969.74 | K | Joback Method |
| tc | 1199.13 | K | Joback Method |
| tf | 538.37 | K | Joback Method |
| vc | 1.595 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1409.71 | J/mol×K | 969.74 | Joback Method |
| cpg | 1431.77 | J/mol×K | 1007.97 | Joback Method |
| cpg | 1451.97 | J/mol×K | 1046.20 | Joback Method |
| cpg | 1470.38 | J/mol×K | 1084.43 | Joback Method |
| cpg | 1487.05 | J/mol×K | 1122.66 | Joback Method |
| cpg | 1502.06 | J/mol×K | 1160.89 | Joback Method |
| cpg | 1515.46 | J/mol×K | 1199.13 | Joback Method |
| dvisc | 0.0003585 | Pa×s | 538.37 | Joback Method |
| dvisc | 0.0001634 | Pa×s | 610.26 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0000879 | Pa×s | 682.16 | Joback Method |
| dvisc | 0.0000532 | Pa×s | 754.06 | Joback Method |
| dvisc | 0.0000352 | Pa×s | 825.95 | Joback Method |
| dvisc | 0.0000248 | Pa×s | 897.85 | Joback Method |
| dvisc | 0.0000185 | Pa×s | 969.74 | Joback Method |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U354496&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 |

# 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 |