

Didodecyl hexanedioate

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| Other names: | dilauryl adipate |
| Inchi: | InChI=1S/C30H58O4/c1-3-5-7-9-11-13-15-17-19-23-27-33-29(31)25-21-22-26-30(32)34- |
| InchiKey: | GHKVUVOPHDYRJC-UHFFFAOYSA-N |
| Formula: | C30H58O4 |
| SMILES: | CCCCCCCCCCCCOC(=O)CCCCC(=O)OCCCCCCCCCCCCC |
| Mol. weight [g/mol]: | 482.78 |
| CAS: | 3072-02-4 |

Physical Properties

| Property code | Value | Unit | Source |
|---------------|---------------|----------------------|----------------|
| gf | -266.12 | kJ/mol | Joback Method |
| hf | -1152.13 | kJ/mol | Joback Method |
| hfus | 79.03 | kJ/mol | Joback Method |
| hvap | 100.69 | kJ/mol | Joback Method |
| log10ws | -10.11 | | Crippen Method |
| logp | 9.475 | | Crippen Method |
| mcvol | 448.440 | ml/mol | McGowan Method |
| pc | 623.13 | kPa | Joback Method |
| tb | 1038.38 | K | Joback Method |
| tc | 1305.67 | K | Joback Method |
| tf | 313.45 ± 2.00 | K | NIST Webbook |
| vc | 1.764 | m ³ /kmol | Joback Method |

Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---------------|-----------|---------|-----------------|---------------|
| cpg | 1605.20 | J/mol×K | 1038.38 | Joback Method |
| cpg | 1629.54 | J/mol×K | 1082.93 | Joback Method |
| cpg | 1651.34 | J/mol×K | 1127.48 | Joback Method |
| cpg | 1670.72 | J/mol×K | 1172.02 | Joback Method |
| cpg | 1687.79 | J/mol×K | 1216.57 | Joback Method |
| cpg | 1702.67 | J/mol×K | 1261.12 | Joback Method |
| cpg | 1715.46 | J/mol×K | 1305.67 | Joback Method |
| dvisc | 0.0002389 | Paxs | 572.18 | Joback Method |

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|-------|-----------|------|---------|---------------|
| dvisc | 0.0001064 | Paxs | 649.88 | Joback Method |
| dvisc | 0.0000563 | Paxs | 727.58 | Joback Method |
| dvisc | 0.0000337 | Paxs | 805.28 | Joback Method |
| dvisc | 0.0000221 | Paxs | 882.98 | Joback Method |
| dvisc | 0.0000155 | Paxs | 960.68 | Joback Method |
| dvisc | 0.0000114 | Paxs | 1038.38 | Joback Method |

Sources

| | |
|------------------------|---|
| Crippen Method: | http://pubs.acs.org/doi/abs/10.1021/ci9903071 |
| Crippen Method: | https://www.cheméo.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=C3072024&Units=SI |

Legend

| | |
|----------------------------|---|
| cp_g: | Ideal gas heat capacity |
| dvisc: | Dynamic viscosity |
| g_f: | Standard Gibbs free energy of formation |
| h_f: | Enthalpy of formation at standard conditions |
| h_{fus}: | Enthalpy of fusion at standard conditions |
| h_{vap}: | Enthalpy of vaporization at standard conditions |
| log₁₀ws: | Log ₁₀ of Water solubility in mol/l |
| log_p: | 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 |

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