# Glutaric acid, 10-chlorodecyl dodecyl ester

**Inchi:** InChI=1S/C27H51ClO4/c1-2-3-4-5-6-7-9-12-15-18-24-31-26(29)21-20-22-27(30)32-25-19
**InchiKey:** PGAJZLBKBFRPEW-UHFFFAOYSA-N
**Formula:** C27H51ClO4
**SMILES:** CCCCCCCCCCCCOC(=O)CCCC(=O)OCCCCCCCCCCCl
**Mol. weight [g/mol]:** 475.14

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -303.31 | kJ/mol | Joback Method |
| hf | -1105.95 | kJ/mol | Joback Method |
| hfus | 75.46 | kJ/mol | Joback Method |
| hvap | 98.39 | kJ/mol | Joback Method |
| log10ws | -9.00 | | Crippen Method |
| logp | 8.524 | | Crippen Method |
| mcvol | 418.410 | ml/mol | McGowan Method |
| pc | 709.22 | kPa | Joback Method |
| rinpol | 3457.00 | | NIST Webbook |
| tb | 1007.17 | K | Joback Method |
| tc | 1250.03 | K | Joback Method |
| tf | 568.29 | K | Joback Method |
| vc | 1.645 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1439.54 | J/mol×K | 1007.17 | Joback Method |
| cpg | 1460.65 | J/mol×K | 1047.65 | Joback Method |
| cpg | 1479.77 | J/mol×K | 1088.12 | Joback Method |
| cpg | 1496.99 | J/mol×K | 1128.60 | Joback Method |
| cpg | 1512.38 | J/mol×K | 1169.08 | Joback Method |
| cpg | 1526.02 | J/mol×K | 1209.55 | Joback Method |
| cpg | 1537.98 | J/mol×K | 1250.03 | Joback Method |
| dvisc | 0.0002741 | Pa×s | 568.29 | Joback Method |
| dvisc | 0.0001289 | Pa×s | 641.44 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0000707 | Pa×s | 714.58 | Joback Method |
| dvisc | 0.0000434 | Pa×s | 787.73 | Joback Method |
| dvisc | 0.0000289 | Pa×s | 860.88 | Joback Method |
| dvisc | 0.0000205 | Pa×s | 934.02 | Joback Method |
| dvisc | 0.0000153 | Pa×s | 1007.17 | Joback Method |

# Sources

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|---|---|
| **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=U359405&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# 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 |

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