# Glutaric acid, 2,2,3,3-tetrafluoropropyl tetradecyl ester

**Inchi:** InChI=1S/C22H38F4O4/c1-2-3-4-5-6-7-8-9-10-11-12-13-17-29-19(27)15-14-16-20(28)30
**InchiKey:** LDJPUSSHPYTWOX-UHFFFAOYSA-N
**Formula:** C22H38F4O4
**SMILES:** CCCCCCCCCCCCCCOC(=O)CCCC(=O)OCC(F)(F)C(F)F
**Mol. weight [g/mol]:** 442.53

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -1112.32 | kJ/mol | Joback Method |
| hf | -1785.48 | kJ/mol | Joback Method |
| hfus | 59.69 | kJ/mol | Joback Method |
| hvap | 77.93 | kJ/mol | Joback Method |
| log10ws | -7.38 | | Crippen Method |
| logp | 6.845 | | Crippen Method |
| mcvol | 342.800 | ml/mol | McGowan Method |
| pc | 869.65 | kPa | Joback Method |
| rinpol | 2441.00 | | NIST Webbook |
| rinpol | 2441.00 | | NIST Webbook |
| tb | 848.75 | K | Joback Method |
| tc | 1040.25 | K | Joback Method |
| tf | 471.80 | K | Joback Method |
| vc | 1.371 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1122.02 | J/mol×K | 848.75 | Joback Method |
| cpg | 1140.55 | J/mol×K | 880.67 | Joback Method |
| cpg | 1157.89 | J/mol×K | 912.58 | Joback Method |
| cpg | 1174.09 | J/mol×K | 944.50 | Joback Method |
| cpg | 1189.19 | J/mol×K | 976.42 | Joback Method |
| cpg | 1203.22 | J/mol×K | 1008.34 | Joback Method |
| cpg | 1216.25 | J/mol×K | 1040.25 | Joback Method |

# Sources

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|---|---|
| **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 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U391635&Units=SI |

# Legend

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **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 |