

# Glutaric acid, dodecyl 2-methylphenyl ester

**Inchi:** InChI=1S/C24H38O4/c1-3-4-5-6-7-8-9-10-11-14-20-27-23(25)18-15-19-24(26)28-22-17-16  
**InchiKey:** XCFLTBUJHVRCLZ-UHFFFAOYSA-N  
**Formula:** C24H38O4  
**SMILES:** CCCCCCCCCCOC(=O)CCCC(=O)Oc1ccccc1C  
**Mol. weight [g/mol]:** 390.56

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | -213.86 | kJ/mol  | Joback Method  |
| hf            | -803.23 | kJ/mol  | Joback Method  |
| hfus          | 57.14   | kJ/mol  | Joback Method  |
| hvap          | 90.27   | kJ/mol  | Joback Method  |
| log10ws       | -7.40   |         | Crippen Method |
| logp          | 6.535   |         | Crippen Method |
| mcvol         | 340.140 | ml/mol  | McGowan Method |
| pc            | 1031.25 | kPa     | Joback Method  |
| rinpol        | 2920.00 |         | NIST Webbook   |
| tb            | 932.76  | K       | Joback Method  |
| tc            | 1142.45 | K       | Joback Method  |
| tf            | 543.50  | K       | Joback Method  |
| vc            | 1.319   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 1119.44   | J/mol×K | 932.76          | Joback Method |
| cpg           | 1136.46   | J/mol×K | 967.71          | Joback Method |
| cpg           | 1152.13   | J/mol×K | 1002.66         | Joback Method |
| cpg           | 1166.46   | J/mol×K | 1037.60         | Joback Method |
| cpg           | 1179.51   | J/mol×K | 1072.55         | Joback Method |
| cpg           | 1191.30   | J/mol×K | 1107.50         | Joback Method |
| cpg           | 1201.88   | J/mol×K | 1142.45         | Joback Method |
| dvisc         | 0.0003848 | Pa×s    | 543.50          | Joback Method |
| dvisc         | 0.0002018 | Pa×s    | 608.38          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0001199 | Pa×s | 673.25 | Joback Method |
| dvisc | 0.0000780 | Pa×s | 738.13 | Joback Method |
| dvisc | 0.0000544 | Pa×s | 803.01 | Joback Method |
| dvisc | 0.0000401 | Pa×s | 867.88 | Joback Method |
| dvisc | 0.0000308 | Pa×s | 932.76 | Joback Method |

## Sources

|                        |                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U358560&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U358560&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>                                 |
| <b>Crippen Method:</b> | <a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>                         |
| <b>Joback Method:</b>  | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                     |
| <b>McGowan Method:</b> | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                     |

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>dvisc:</b>   | Dynamic viscosity                               |
| <b>gf:</b>      | Standard Gibbs free energy of formation         |
| <b>hf:</b>      | Enthalpy of formation at standard conditions    |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions       |
| <b>hvap:</b>    | Enthalpy of vaporization at standard conditions |
| <b>log10ws:</b> | Log10 of Water solubility in mol/l              |
| <b>logp:</b>    | Octanol/Water partition coefficient             |
| <b>mcvol:</b>   | McGowan's characteristic volume                 |
| <b>pc:</b>      | Critical Pressure                               |
| <b>rinpol:</b>  | Non-polar retention indices                     |
| <b>tb:</b>      | Normal Boiling Point Temperature                |
| <b>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |
| <b>vc:</b>      | Critical Volume                                 |

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