

# Diglycolic acid, 2-isopropylphenyl pentyl ester

**Inchi:** InChI=1S/C18H26O5/c1-4-5-8-11-22-17(19)12-21-13-18(20)23-16-10-7-6-9-15(16)14(2)3  
**InchiKey:** QREZTYLBQIDPGF-UHFFFAOYSA-N  
**Formula:** C18H26O5  
**SMILES:** CCCCCOC(=O)COCC(=O)Oc1ccccc1C(C)C  
**Mol. weight [g/mol]:** 322.40

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | -371.82 | kJ/mol               | Joback Method  |
| hf            | -816.89 | kJ/mol               | Joback Method  |
| hfus          | 39.27   | kJ/mol               | Joback Method  |
| hvap          | 78.93   | kJ/mol               | Joback Method  |
| log10ws       | -3.85   |                      | Crippen Method |
| logp          | 3.465   |                      | Crippen Method |
| mvol          | 261.470 | ml/mol               | McGowan Method |
| pc            | 1541.49 | kPa                  | Joback Method  |
| rinpol        | 2695.00 |                      | NIST Webbook   |
| rinpol        | 2695.00 |                      | NIST Webbook   |
| tb            | 817.46  | K                    | Joback Method  |
| tc            | 1019.56 | K                    | Joback Method  |
| tf            | 483.11  | K                    | Joback Method  |
| vc            | 0.996   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 790.54    | J/molxK | 817.46          | Joback Method |
| cpg           | 856.24    | J/molxK | 985.88          | Joback Method |
| cpg           | 845.35    | J/molxK | 952.19          | Joback Method |
| cpg           | 833.34    | J/molxK | 918.51          | Joback Method |
| cpg           | 820.20    | J/molxK | 884.83          | Joback Method |
| cpg           | 805.94    | J/molxK | 851.14          | Joback Method |
| cpg           | 866.02    | J/molxK | 1019.56         | Joback Method |
| dvisc         | 0.0000500 | Paxs    | 817.46          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0000647 | Paxs | 761.73 | Joback Method |
| dvisc | 0.0000872 | Paxs | 706.01 | Joback Method |
| dvisc | 0.0001237 | Paxs | 650.28 | Joback Method |
| dvisc | 0.0001875 | Paxs | 594.56 | Joback Method |
| dvisc | 0.0003097 | Paxs | 538.84 | Joback Method |
| dvisc | 0.0005741 | Paxs | 483.11 | Joback Method |

## Sources

|                        |   |
|------------------------|---|
| <b>McGowan Method:</b> | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                     |
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U382289&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U382289&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307I">http://pubs.acs.org/doi/abs/10.1021/ci990307I</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>                                     |

## Legend

|                            |   |
|----------------------------|---|
| <b>cp<sub>g</sub>:</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>h<sub>vap</sub>:</b>    | Enthalpy of vaporization at standard conditions |
| <b>log<sub>10</sub>ws:</b> | Log <sub>10</sub> of Water solubility in mol/l  |
| <b>log<sub>p</sub>:</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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