

# Succinic acid, naphth-2-ylmethyl 3-ethylphenyl ester

|                      |  |
|----------------------|--|
| Inchi:               | InChI=1S/C23H22O4/c1-2-17-6-5-9-21(15-17)27-23(25)13-12-22(24)26-16-18-10-11-19- |
| InchiKey:            | XMOWUHBTKFCDGK-UHFFFAOYSA-N  |
| Formula:             | C23H22O4   |
| SMILES:              | CCc1cccc(OC(=O)CCC(=O)OCc2ccc3ccccc3c2)c1  |
| Mol. weight [g/mol]: | 362.42   |

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | -12.85  | kJ/mol               | Joback Method  |
| hf            | -366.46 | kJ/mol               | Joback Method  |
| hfus          | 45.22   | kJ/mol               | Joback Method  |
| hvap          | 92.62   | kJ/mol               | Joback Method  |
| log10ws       | -6.62   |                      | Crippen Method |
| logp          | 4.831   |                      | Crippen Method |
| mvol          | 282.830 | ml/mol               | McGowan Method |
| pc            | 1656.49 | kPa                  | Joback Method  |
| rinpol        | 3077.00 |                      | NIST Webbook   |
| rinpol        | 3077.00 |                      | NIST Webbook   |
| tb            | 960.52  | K                    | Joback Method  |
| tc            | 1197.59 | K                    | Joback Method  |
| tf            | 603.87  | K                    | Joback Method  |
| vc            | 1.077   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 874.15    | J/molxK | 960.52          | Joback Method |
| cpg           | 887.05    | J/molxK | 1000.03         | Joback Method |
| cpg           | 898.77    | J/molxK | 1039.54         | Joback Method |
| cpg           | 909.37    | J/molxK | 1079.06         | Joback Method |
| cpg           | 918.94    | J/molxK | 1118.57         | Joback Method |
| cpg           | 927.56    | J/molxK | 1158.08         | Joback Method |
| cpg           | 935.31    | J/molxK | 1197.59         | Joback Method |
| dvisc         | 0.0004574 | Paxs    | 603.87          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0002984 | Paxs | 663.31 | Joback Method |
| dvisc | 0.0002088 | Paxs | 722.75 | Joback Method |
| dvisc | 0.0001542 | Paxs | 782.19 | Joback Method |
| dvisc | 0.0001189 | Paxs | 841.64 | Joback Method |
| dvisc | 0.0000949 | Paxs | 901.08 | Joback Method |
| dvisc | 0.0000779 | Paxs | 960.52 | Joback Method |

## Sources

|                        |   |
|------------------------|---|
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U390115&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U390115&amp;Units=SI</a> |
| <b>Crippen Method:</b> | <a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</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>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>m<sub>cvol</sub>:</b>   | McGowan's characteristic volume                 |
| <b>pc:</b>                 | Critical Pressure                               |
| <b>rin<sub>pol</sub>:</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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