

# Succinic acid, 2-methoxy-4-chlorobenzyl nonyl ester

**Inchi:** InChI=1S/C21H31ClO5/c1-3-4-5-6-7-8-9-14-26-20(23)12-13-21(24)27-16-17-10-11-18(2)  
**InchiKey:** AIUJUCAOLNULEU-UHFFFAOYSA-N  
**Formula:** C21H31ClO5  
**SMILES:** CCCCCCCCCOC(=O)CCC(=O)OCc1ccc(Cl)cc1OC  
**Mol. weight [g/mol]:** 398.92

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | -365.68 | kJ/mol               | Joback Method  |
| hf            | -900.74 | kJ/mol               | Joback Method  |
| hfus          | 54.37   | kJ/mol               | Joback Method  |
| hvap          | 91.05   | kJ/mol               | Joback Method  |
| log10ws       | -6.32   |                      | Crippen Method |
| logp          | 5.466   |                      | Crippen Method |
| mvol          | 315.980 | ml/mol               | McGowan Method |
| pc            | 1193.17 | kPa                  | Joback Method  |
| rinpol        | 2839.00 |                      | NIST Webbook   |
| rinpol        | 2839.00 |                      | NIST Webbook   |
| tb            | 928.95  | K                    | Joback Method  |
| tc            | 1139.76 | K                    | Joback Method  |
| tf            | 574.36  | K                    | Joback Method  |
| vc            | 1.218   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 992.07    | J/molxK | 928.95          | Joback Method |
| cpg           | 1006.54   | J/molxK | 964.08          | Joback Method |
| cpg           | 1019.66   | J/molxK | 999.22          | Joback Method |
| cpg           | 1031.44   | J/molxK | 1034.35         | Joback Method |
| cpg           | 1041.89   | J/molxK | 1069.49         | Joback Method |
| cpg           | 1051.02   | J/molxK | 1104.62         | Joback Method |
| cpg           | 1058.85   | J/molxK | 1139.76         | Joback Method |
| dvisc         | 0.0002676 | Paxs    | 574.36          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0001579 | Paxs | 633.46 | Joback Method |
| dvisc | 0.0001019 | Paxs | 692.56 | Joback Method |
| dvisc | 0.0000705 | Paxs | 751.65 | Joback Method |
| dvisc | 0.0000514 | Paxs | 810.75 | Joback Method |
| dvisc | 0.0000392 | Paxs | 869.85 | Joback Method |
| dvisc | 0.0000309 | Paxs | 928.95 | Joback Method |

## Sources

|                        |   |
|------------------------|---|
| <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>                     |
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=U380853&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=U380853&amp;Units=SI</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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