

# 3,4-DIETHOXYBENZOIC ACID

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| Other names:         | Benzoic acid, 3,4-diethoxy-                                                       |
| Inchi:               | InChI=1S/C11H14O4/c1-3-14-9-6-5-8(11(12)13)7-10(9)15-4-2/h5-7H,3-4H2,1-2H3,(H,12) |
| InchiKey:            | VVKCVAPLTRZJHH-UHFFFAOYSA-N                                                       |
| Formula:             | C11H14O4                                                                          |
| SMILES:              | CCOc1ccc(C(=O)O)cc1OCC                                                            |
| Mol. weight [g/mol]: | 210.23                                                                            |

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| hf            | -679.12 | kJ/mol | Cheméo Relay (1.0) |
| hfus          | 25.57   | kJ/mol | Joback Method      |
| ie            | 8.59    | eV     | Cheméo Relay (1.0) |
| log10ws       | -2.75   |        | Cheméo Relay (1.0) |
| logp          | 2.182   |        | Crippen Method     |
| mcvol         | 161.270 | ml/mol | McGowan Method     |
| tb            | 585.33  | K      | Cheméo Relay (1.0) |
| tf            | 431.36  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 422.40    | J/mol×K | 678.61          | Joback Method |
| cpg           | 433.78    | J/mol×K | 711.36          | Joback Method |
| cpg           | 444.55    | J/mol×K | 744.10          | Joback Method |
| cpg           | 454.68    | J/mol×K | 776.85          | Joback Method |
| cpg           | 464.20    | J/mol×K | 809.60          | Joback Method |
| cpg           | 473.08    | J/mol×K | 842.34          | Joback Method |
| cpg           | 481.32    | J/mol×K | 875.09          | Joback Method |
| dvisc         | 0.0009642 | Pa×s    | 420.40          | Joback Method |
| dvisc         | 0.0004463 | Pa×s    | 463.44          | Joback Method |
| dvisc         | 0.0002355 | Pa×s    | 506.47          | Joback Method |
| dvisc         | 0.0001373 | Pa×s    | 549.50          | Joback Method |
| dvisc         | 0.0000866 | Pa×s    | 592.54          | Joback Method |
| dvisc         | 0.0000582 | Pa×s    | 635.58          | Joback Method |

## Sources

|                                  |                                                                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <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>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>Cheméo Relay (1.0):</b>       |                                                                                                                                             |
| <b>Cheméo Relay (1.0, beta):</b> |                                                                                                                                             |
| <b>NIST Webbook:</b>             | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C5409314&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C5409314&amp;Units=SI</a> |

## Legend

|                 |                                              |
|-----------------|----------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                      |
| <b>dvisc:</b>   | Dynamic viscosity                            |
| <b>hf:</b>      | Enthalpy of formation at standard conditions |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions    |
| <b>ie:</b>      | Ionization energy                            |
| <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>tb:</b>      | Normal Boiling Point Temperature             |
| <b>tf:</b>      | Normal melting (fusion) point                |

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