

# Benzoic acid, 3-bromo-, ethyl ester

|                             |  |
|-----------------------------|--|
| <b>Other names:</b>         | Benzoic acid, m-bromo-, ethyl ester<br>Ethyl 3-bromobenzoate<br>3-Bromobenzoic acid, ethyl ester |
| <b>Inchi:</b>               | InChI=1S/C9H9BrO2/c1-2-12-9(11)7-4-3-5-8(10)6-7/h3-6H,2H2,1H3                                    |
| <b>InchiKey:</b>            | QAUASTLEZAPQTB-UHFFFAOYSA-N  |
| <b>Formula:</b>             | C9H9BrO2   |
| <b>SMILES:</b>              | CCOC(=O)c1cccc(Br)c1   |
| <b>Mol. weight [g/mol]:</b> | 229.07   |
| <b>CAS:</b>                 | 24398-88-7   |

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | -91.92  | kJ/mol  | Joback Method  |
| hf            | -222.50 | kJ/mol  | Joback Method  |
| hfus          | 20.79   | kJ/mol  | Joback Method  |
| hvap          | 54.16   | kJ/mol  | Joback Method  |
| log10ws       | -3.30   |         | Crippen Method |
| logp          | 2.626   |         | Crippen Method |
| mcvol         | 138.850 | ml/mol  | McGowan Method |
| pc            | 3668.65 | kPa     | Joback Method  |
| tb            | 534.20  | K       | NIST Webbook   |
| tb            | 534.00  | K       | NIST Webbook   |
| tc            | 811.07  | K       | Joback Method  |
| tf            | 362.09  | K       | Joback Method  |
| vc            | 0.517   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 291.08 | J/molxK | 579.43          | Joback Method |
| cpg           | 302.44 | J/molxK | 618.04          | Joback Method |
| cpg           | 313.06 | J/molxK | 656.64          | Joback Method |
| cpg           | 322.96 | J/molxK | 695.25          | Joback Method |
| cpg           | 332.17 | J/molxK | 733.85          | Joback Method |

|       |           |         |        |               |
|-------|-----------|---------|--------|---------------|
| cpg   | 340.71    | J/molxK | 772.46 | Joback Method |
| cpg   | 348.60    | J/molxK | 811.07 | Joback Method |
| dvisc | 0.0015157 | Paxs    | 362.09 | Joback Method |
| dvisc | 0.0009661 | Paxs    | 398.31 | Joback Method |
| dvisc | 0.0006638 | Paxs    | 434.54 | Joback Method |
| dvisc | 0.0004832 | Paxs    | 470.76 | Joback Method |
| dvisc | 0.0003681 | Paxs    | 506.98 | Joback Method |
| dvisc | 0.0002908 | Paxs    | 543.21 | Joback Method |
| dvisc | 0.0002365 | Paxs    | 579.43 | Joback Method |

## Pressure Dependent Properties

| Property code | Value  | Unit | Pressure [kPa] | Source       |
|---------------|--------|------|----------------|--------------|
| tbrp          | 403.70 | K    | 1.60           | NIST Webbook |

## 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=C24398887&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C24398887&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>mvol:</b>    | McGowan's characteristic volume                 |
| <b>pc:</b>      | Critical Pressure                               |

|              |                                   |
|--------------|-----------------------------------|
| <b>tb:</b>   | Normal Boiling Point Temperature  |
| <b>tbrp:</b> | Boiling point at reduced pressure |
| <b>tc:</b>   | Critical Temperature              |
| <b>tf:</b>   | Normal melting (fusion) point     |
| <b>vc:</b>   | Critical Volume                   |

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