

# Benzaldehyde, 4,5-dichloro-2-hydroxy

**Inchi:** InChI=1S/C7H4Cl2O2/c8-5-1-4(3-10)7(11)2-6(5)9/h1-3,11H  
**InchiKey:** RZVJTHXDHLQJIK-UHFFFAOYSA-N  
**Formula:** C7H4Cl2O2  
**SMILES:** O=Cc1cc(Cl)c(Cl)cc1O  
**Mol. weight [g/mol]:** 191.01

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | -176.79 | kJ/mol               | Joback Method  |
| hf            | -268.59 | kJ/mol               | Joback Method  |
| hfus          | 23.62   | kJ/mol               | Joback Method  |
| hvap          | 63.28   | kJ/mol               | Joback Method  |
| log10ws       | -2.63   |                      | Crippen Method |
| logp          | 2.511   |                      | Crippen Method |
| mcvol         | 117.650 | ml/mol               | McGowan Method |
| pc            | 4822.53 | kPa                  | Joback Method  |
| rinpol        | 1376.00 |                      | NIST Webbook   |
| rinpol        | 1323.00 |                      | NIST Webbook   |
| rinpol        | 1338.00 |                      | NIST Webbook   |
| rinpol        | 1343.00 |                      | NIST Webbook   |
| rinpol        | 1358.00 |                      | NIST Webbook   |
| rinpol        | 1358.00 |                      | NIST Webbook   |
| rinpol        | 1343.00 |                      | NIST Webbook   |
| rinpol        | 1342.00 |                      | NIST Webbook   |
| rinpol        | 1358.00 |                      | NIST Webbook   |
| rinpol        | 1358.00 |                      | NIST Webbook   |
| ripol         | 2036.00 |                      | NIST Webbook   |
| ripol         | 1973.00 |                      | NIST Webbook   |
| ripol         | 1973.00 |                      | NIST Webbook   |
| ripol         | 2054.00 |                      | NIST Webbook   |
| ripol         | 2036.00 |                      | NIST Webbook   |
| ripol         | 2020.00 |                      | NIST Webbook   |
| ripol         | 2036.00 |                      | NIST Webbook   |
| tb            | 600.34  | K                    | Joback Method  |
| tc            | 844.92  | K                    | Joback Method  |
| tf            | 433.67  | K                    | Joback Method  |
| vc            | 0.401   | m <sup>3</sup> /kmol | Joback Method  |

# Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 234.27    | J/molxK | 600.34          | Joback Method |
| cpg           | 241.01    | J/molxK | 641.10          | Joback Method |
| cpg           | 247.21    | J/molxK | 681.87          | Joback Method |
| cpg           | 252.93    | J/molxK | 722.63          | Joback Method |
| cpg           | 258.26    | J/molxK | 763.39          | Joback Method |
| cpg           | 263.28    | J/molxK | 804.16          | Joback Method |
| cpg           | 268.07    | J/molxK | 844.92          | Joback Method |
| dvisc         | 0.0007061 | Paxs    | 433.67          | Joback Method |
| dvisc         | 0.0004081 | Paxs    | 461.45          | Joback Method |
| dvisc         | 0.0002511 | Paxs    | 489.23          | Joback Method |
| dvisc         | 0.0001627 | Paxs    | 517.00          | Joback Method |
| dvisc         | 0.0001102 | Paxs    | 544.78          | Joback Method |
| dvisc         | 0.0000776 | Paxs    | 572.56          | Joback Method |
| dvisc         | 0.0000564 | Paxs    | 600.34          | 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=R45603&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R45603&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>ripol:</b>   | 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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