

# Benzene, 1,3-diphenoxy-

**Other names:**

Benzene, m-diphenoxy-  
m-Diphenoxybenzene  
m-Diphenyloxybenzene  
m-Phenoxyphenoxybenzene  
m-3F2E  
1,3-Diphenoxybenzene

**Inchi:**

InChI=1S/C18H14O2/c1-3-8-15(9-4-1)19-17-12-7-13-18(14-17)20-16-10-5-2-6-11-16/h1-

**InchiKey:**

JTNRGGLCSLZOOQ-UHFFFAOYSA-N

**Formula:**

C18H14O2

**SMILES:**

c1ccc(Oc2cccc(Oc3ccccc3)c2)cc1

**Mol. weight [g/mol]:**

262.30

**CAS:**

3379-38-2

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | 218.28  | kJ/mol               | Joback Method  |
| hf            | 18.83   | kJ/mol               | Joback Method  |
| hfus          | 26.49   | kJ/mol               | Joback Method  |
| hvap          | 67.97   | kJ/mol               | Joback Method  |
| log10ws       | -4.74   |                      | Crippen Method |
| logp          | 5.271   |                      | Crippen Method |
| mcvol         | 204.940 | ml/mol               | McGowan Method |
| pc            | 2495.01 | kPa                  | Joback Method  |
| tb            | 741.10  | K                    | Joback Method  |
| tc            | 1001.31 | K                    | Joback Method  |
| tf            | 428.86  | K                    | Joback Method  |
| vc            | 0.755   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 548.65 | J/mol×K | 741.10          | Joback Method |
| cpg           | 617.09 | J/mol×K | 957.94          | Joback Method |
| cpg           | 606.27 | J/mol×K | 914.57          | Joback Method |

|       |           |         |         |               |
|-------|-----------|---------|---------|---------------|
| cpg   | 594.08    | J/molxK | 871.20  | Joback Method |
| cpg   | 580.46    | J/molxK | 827.84  | Joback Method |
| cpg   | 565.34    | J/molxK | 784.47  | Joback Method |
| cpg   | 626.62    | J/molxK | 1001.31 | Joback Method |
| dvisc | 0.0000761 | Paxs    | 741.10  | Joback Method |
| dvisc | 0.0000962 | Paxs    | 689.06  | Joback Method |
| dvisc | 0.0001264 | Paxs    | 637.02  | Joback Method |
| dvisc | 0.0001742 | Paxs    | 584.98  | Joback Method |
| dvisc | 0.0002557 | Paxs    | 532.94  | Joback Method |
| dvisc | 0.0004077 | Paxs    | 480.90  | Joback Method |
| dvisc | 0.0007282 | Paxs    | 428.86  | Joback Method |

## Sources

|                        |   |
|------------------------|---|
| <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=C3379382&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C3379382&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>                                   |

## 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>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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