

# 1,1'-Biphenyl, 2,2',3,3',4,5,6,6'-octachloro-

|                      |                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------|
| Other names:         | 2,2',3,3',4,5,6,6'-Octachloro-1,1'-biphenyl<br>2,2',3,3',4,5,6,6'-Octachlorobiphenyl<br>PCB 200 |
| Inchi:               | InChI=1S/C12H2Cl8/c13-3-1-2-4(14)7(15)5(3)6-8(16)10(18)12(20)11(19)9(6)17/h1-2H                 |
| InchiKey:            | HHXNVASVVVNNNDG-UHFFFAOYSA-N                                                                    |
| Formula:             | C12H2Cl8                                                                                        |
| SMILES:              | Clc1ccc(Cl)c(-c2c(Cl)c(Cl)c(Cl)c(Cl)c2Cl)c1Cl                                                   |
| Mol. weight [g/mol]: | 429.77                                                                                          |
| CAS:                 | 52663-73-7                                                                                      |

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | 102.50  | kJ/mol  | Joback Method  |
| hf            | -35.63  | kJ/mol  | Joback Method  |
| hfus          | 45.38   | kJ/mol  | Joback Method  |
| hvap          | 87.23   | kJ/mol  | Joback Method  |
| log10ws       | -9.55   |         | Crippen Method |
| logp          | 8.581   |         | Crippen Method |
| mcvol         | 230.340 | ml/mol  | McGowan Method |
| pc            | 2216.62 | kPa     | Joback Method  |
| tb            | 866.60  | K       | Joback Method  |
| tc            | 1140.81 | K       | Joback Method  |
| tf            | 617.36  | K       | Joback Method  |
| vc            | 0.883   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 427.83 | J/mol×K | 866.60          | Joback Method |
| cpg           | 450.83 | J/mol×K | 1095.11         | Joback Method |
| cpg           | 447.49 | J/mol×K | 1049.40         | Joback Method |
| cpg           | 443.56 | J/mol×K | 1003.70         | Joback Method |
| cpg           | 438.99 | J/mol×K | 958.00          | Joback Method |
| cpg           | 433.76 | J/mol×K | 912.30          | Joback Method |

|       |           |         |         |               |
|-------|-----------|---------|---------|---------------|
| cpg   | 453.59    | J/mol×K | 1140.81 | Joback Method |
| dvisc | 0.0001131 | Pa×s    | 866.60  | Joback Method |
| dvisc | 0.0001305 | Pa×s    | 825.06  | Joback Method |
| dvisc | 0.0001530 | Pa×s    | 783.52  | Joback Method |
| dvisc | 0.0001825 | Pa×s    | 741.98  | Joback Method |
| dvisc | 0.0002223 | Pa×s    | 700.44  | Joback Method |
| dvisc | 0.0002775 | Pa×s    | 658.90  | Joback Method |
| dvisc | 0.0003571 | Pa×s    | 617.36  | Joback Method |

## Sources

|                        |                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <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>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=C52663737&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C52663737&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>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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