

# 3-Hydroxybenz[a]anthracene

|                             |   |
|-----------------------------|---|
| <b>Inchi:</b>               | InChI=1S/C18H12O/c19-16-7-8-17-15(10-16)6-5-14-9-12-3-1-2-4-13(12)11-18(14)17/h1- |
| <b>InchiKey:</b>            | MRRWKFVZIOJBS-UHFFFAOYSA-N  |
| <b>Formula:</b>             | C18H12O   |
| <b>SMILES:</b>              | Oc1ccc2c(ccc3cc4ccccc4cc32)c1   |
| <b>Mol. weight [g/mol]:</b> | 244.29  |

## Physical Properties

| Property code | Value   | Unit                 | Source         |
|---------------|---------|----------------------|----------------|
| gf            | 359.16  | kJ/mol               | Joback Method  |
| hf            | 194.64  | kJ/mol               | Joback Method  |
| hfus          | 32.48   | kJ/mol               | Joback Method  |
| hvap          | 77.20   | kJ/mol               | Joback Method  |
| log10ws       | -6.43   |                      | Crippen Method |
| logp          | 4.852   |                      | Crippen Method |
| mvol          | 188.210 | ml/mol               | McGowan Method |
| pc            | 3224.64 | kPa                  | Joback Method  |
| rinpol        | 2871.00 |                      | NIST Webbook   |
| rinpol        | 2871.00 |                      | NIST Webbook   |
| tb            | 785.44  | K                    | Joback Method  |
| tc            | 1054.46 | K                    | Joback Method  |
| tf            | 553.90  | K                    | Joback Method  |
| vc            | 0.667   | m <sup>3</sup> /kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 513.18    | J/molxK | 785.44          | Joback Method |
| cpg           | 526.28    | J/molxK | 830.28          | Joback Method |
| cpg           | 538.83    | J/molxK | 875.11          | Joback Method |
| cpg           | 551.14    | J/molxK | 919.95          | Joback Method |
| cpg           | 563.49    | J/molxK | 964.79          | Joback Method |
| cpg           | 576.20    | J/molxK | 1009.62         | Joback Method |
| cpg           | 589.56    | J/molxK | 1054.46         | Joback Method |
| dvisc         | 0.0003579 | Paxs    | 553.90          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0002356 | Paxs | 592.49 | Joback Method |
| dvisc | 0.0001632 | Paxs | 631.08 | Joback Method |
| dvisc | 0.0001180 | Paxs | 669.67 | Joback Method |
| dvisc | 0.0000883 | Paxs | 708.26 | Joback Method |
| dvisc | 0.0000681 | Paxs | 746.85 | Joback Method |
| dvisc | 0.0000539 | Paxs | 785.44 | Joback Method |

## Sources

|                        |   |
|------------------------|---|
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=R588615&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=R588615&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>                                 |
| <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>                     |

## 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>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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