

# 2-Cyclopenten-1-one, 4-hydroxy-3-methyl-2-(2-propenyl)-

|                      |                                                                                                                                      |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Other names:         | 2-Cyclopenten-1-one, 2-allyl-4-hydroxy-3-methyl-Allethrolon<br>Allethrolone<br>4-Hydroxy-3-methyl-2-(2-propenyl)-2-cyclopenten-1-one |
| Inchi:               | InChI=1S/C9H12O2/c1-3-4-7-6(2)8(10)5-9(7)11/h3,8,10H,1,4-5H2,2H3                                                                     |
| InchiKey:            | KZYVOZABVXLALY-UHFFFAOYSA-N                                                                                                          |
| Formula:             | C9H12O2                                                                                                                              |
| SMILES:              | C=CCC1=C(C)C(O)CC1=O                                                                                                                 |
| Mol. weight [g/mol]: | 152.19                                                                                                                               |
| CAS:                 | 551-45-1                                                                                                                             |

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | -99.42  | kJ/mol  | Joback Method  |
| hf            | -298.27 | kJ/mol  | Joback Method  |
| hfus          | 15.76   | kJ/mol  | Joback Method  |
| hvap          | 57.76   | kJ/mol  | Joback Method  |
| log10ws       | -1.85   |         | Crippen Method |
| logp          | 1.213   |         | Crippen Method |
| mcvol         | 125.650 | ml/mol  | McGowan Method |
| pc            | 3352.86 | kPa     | Joback Method  |
| tb            | 586.40  | K       | Joback Method  |
| tc            | 789.42  | K       | Joback Method  |
| tf            | 355.17  | K       | Joback Method  |
| vc            | 0.473   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 309.95 | J/mol×K | 586.40          | Joback Method |
| cpg           | 322.03 | J/mol×K | 620.24          | Joback Method |
| cpg           | 333.55 | J/mol×K | 654.07          | Joback Method |
| cpg           | 344.49 | J/mol×K | 687.91          | Joback Method |
| cpg           | 354.87 | J/mol×K | 721.75          | Joback Method |

|     |        |         |        |               |
|-----|--------|---------|--------|---------------|
| cpg | 364.68 | J/mol×K | 755.58 | Joback Method |
| cpg | 373.93 | J/mol×K | 789.42 | Joback Method |

## Sources

|                        |                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <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=C551451&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C551451&amp;Units=SI</a> |
| <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>                         |

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <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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