# Phenol, 4-(triphenylmethyl)-

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|---|---|
| **Other names:** | p-Cresol, «alpha»,«alpha»,«alpha»-triphenyl- |
| | p-Tritylphenol |
| | 4-Tritylphenol |
| | p-Triphenylmethylphenol |
| **Inchi:** | InChI=1S/C25H20O/c26-24-18-16-23(17-19-24)25(20-10-4-1-5-11-20,21-12-6-2-7-13-21) |
| **InchiKey:** | NIPKXTKKYSKEON-UHFFFAOYSA-N |
| **Formula:** | C25H20O |
| **SMILES:** | Oc1ccc(C(c2ccccc2)(c2ccccc2)c2ccccc2)cc1 |
| **Mol. weight [g/mol]:** | 336.43 |
| **CAS:** | 978-86-9 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 457.48 | kJ/mol | Joback Method |
| hf | 200.73 | kJ/mol | Joback Method |
| hfus | 35.04 | kJ/mol | Joback Method |
| hvap | 92.07 | kJ/mol | Joback Method |
| log10ws | -6.23 | | Crippen Method |
| logp | 5.775 | | Crippen Method |
| mcvol | 273.940 | ml/mol | McGowan Method |
| pc | 2212.45 | kPa | Joback Method |
| tb | 955.51 | K | Joback Method |
| tc | 1246.74 | K | Joback Method |
| tf | 555.00 ± 4.00 | K | NIST Webbook |
| vc | 0.959 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 843.26 | J/mol×K | 955.51 | Joback Method |
| cpg | 860.29 | J/mol×K | 1004.05 | Joback Method |
| cpg | 876.83 | J/mol×K | 1052.59 | Joback Method |
| cpg | 893.29 | J/mol×K | 1101.13 | Joback Method |
| cpg | 910.09 | J/mol×K | 1149.66 | Joback Method |

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|---|---|---|---|---|
| cpg | 927.63 | J/mol×K | 1198.20 | Joback Method |
| cpg | 946.32 | J/mol×K | 1246.74 | Joback Method |
| dvisc | 0.0000565 | Pa×s | 591.33 | Joback Method |
| dvisc | 0.0000236 | Pa×s | 652.03 | Joback Method |
| dvisc | 0.0000114 | Pa×s | 712.72 | Joback Method |
| dvisc | 0.0000062 | Pa×s | 773.42 | Joback Method |
| dvisc | 0.0000037 | Pa×s | 834.12 | Joback Method |
| dvisc | 0.0000023 | Pa×s | 894.81 | Joback Method |
| dvisc | 0.0000016 | Pa×s | 955.51 | Joback Method |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C978869&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |

# Legend

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **dvisc:** | Dynamic viscosity |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hfus:** | Enthalpy of fusion at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |

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