# Acetamide, N-methyl-N-(4-methylphenyl)-

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|---|---|
| **Other names:** | p-Acetotoluidide, N-methyl-<br>N-Methyl-N-p-tolylacetamide<br>N-Methyl-p-acetotoluidide |
| **Inchi:** | InChI=1S/C10H13NO/c1-8-4-6-10(7-5-8)11(3)9(2)12/h4-7H,1-3H3 |
| **InchiKey:** | ZMYCGFKAPZHNPC-UHFFFAOYSA-N |
| **Formula:** | C10H13NO |
| **SMILES:** | CC(=O)N(C)c1ccc(C)cc1 |
| **Mol. weight [g/mol]:** | 163.22 |
| **CAS:** | 612-03-3 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 117.96 | kJ/mol | Joback Method |
| hf | -69.72 | kJ/mol | Joback Method |
| hfus | 19.93 | kJ/mol | Joback Method |
| hvap | 49.58 | kJ/mol | Joback Method |
| log10ws | -2.05 | | Crippen Method |
| logp | 1.978 | | Crippen Method |
| mcvol | 139.550 | ml/mol | McGowan Method |
| pc | 3082.99 | kPa | Joback Method |
| tb | 526.17 | K | Joback Method |
| tc | 739.11 | K | Joback Method |
| tf | 323.80 | K | Joback Method |
| vc | 0.511 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 310.22 | J/mol×K | 526.17 | Joback Method |
| cpg | 324.55 | J/mol×K | 561.66 | Joback Method |
| cpg | 338.00 | J/mol×K | 597.15 | Joback Method |
| cpg | 350.61 | J/mol×K | 632.64 | Joback Method |
| cpg | 362.42 | J/mol×K | 668.13 | Joback Method |
| cpg | 373.47 | J/mol×K | 703.62 | Joback Method |

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|---|---|---|---|---|
| cpg | 383.78 | J/mol×K | 739.11 | 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=C612033&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 |
| **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 |