# N,N,N'-Trimethyl-1,4-phenylenediamine

**Other names:** p-Phenylenediamine, N,N,N'-trimethyl-
**Inchi:** InChI=1S/C9H14N2/c1-10-8-4-6-9(7-5-8)11(2)3/h4-7,10H,1-3H3
**InchiKey:** AWXUBHMURFEJMY-UHFFFAOYSA-N
**Formula:** C9H14N2
**SMILES:** CNc1ccc(N(C)C)cc1
**Mol. weight [g/mol]:** 150.22
**CAS:** 5369-34-6

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 327.85 | kJ/mol | Joback Method |
| hf | 116.97 | kJ/mol | Joback Method |
| hfus | 20.84 | kJ/mol | Joback Method |
| hvap | 47.05 | kJ/mol | Joback Method |
| log10ws | -1.39 | | Crippen Method |
| logp | 1.794 | | Crippen Method |
| mcvol | 133.870 | ml/mol | McGowan Method |
| pc | 3246.73 | kPa | Joback Method |
| rinpol | 1455.00 | | NIST Webbook |
| rinpol | 1455.00 | | NIST Webbook |
| tb | 499.59 | K | Joback Method |
| tc | 707.32 | K | Joback Method |
| tf | 315.26 | K | Joback Method |
| vc | 0.484 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 293.56 | J/mol×K | 499.59 | Joback Method |
| cpg | 308.28 | J/mol×K | 534.21 | Joback Method |
| cpg | 322.14 | J/mol×K | 568.83 | Joback Method |
| cpg | 335.17 | J/mol×K | 603.45 | Joback Method |
| cpg | 347.41 | J/mol×K | 638.07 | Joback Method |
| cpg | 358.90 | J/mol×K | 672.70 | Joback Method |

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|---|---|---|---|---|
| cpg | 369.67 | J/mol×K | 707.32 | Joback Method |

# Sources

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|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C5369346&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 |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |

# 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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |