# 4,4'-BENZYLIDENEBIS(N,N-DIMETHYLANILINE)

**Other names:** Leuco malachite green
Benzenamine, 4,4'-(phenylmethylene)bis[N,N-dimethyl-
Aniline, 4,4'-benzylidenebis(N,N-dimethyl-
Bis(p-dimethylaminophenyl)phenylmethane
Bis(p-(N,N-dimethylamino)phenyl)phenylmethane
Bis(4,4'-(dimethylamino)phenyl)phenyl methane
C.I. Basic Green 4, leuco base
Malachite green leuco
Malachite green leuco base
Tetramethyldiaminotriphenylmethane
4,4'-Benzylidene bis(N,N-dimethylaniline)
4,4'-Bis(dimethylamino)triphenylmethane
4,4'-Bis(N,N-dimethylaminophenyl)phenylmethane
NSC 36379
N,N,N',N'-tetramethyl-4,4'-benzylidenedianiline

**Inchi:** InChI=1S/C23H26N2/c1-24(2)21-14-10-19(11-15-21)23(18-8-6-5-7-9-18)20-12-16-22(17-

**InchiKey:** WZKXBGJNNCGHIC-UHFFFAOYSA-N

**Formula:** C23H26N2

**SMILES:** CN(C)c1ccc(C(c2ccccc2)c2ccc(N(C)C)cc2)cc1

**Mol. weight [g/mol]:** 330.47

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.7106 | | Cheméo Relay (1.0) |
| gf | 679.87 | kJ/mol | Joback Method |
| hf | 273.37 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 39.19 | kJ/mol | Joback Method |
| hvap | 109.35 | kJ/mol | Cheméo Relay (1.0) |
| ie | 6.94 | eV | Cheméo Relay (1.0) |
| log10ws | -6.33 | | Cheméo Relay (1.0) |
| logp | 4.999 | | Crippen Method |
| mcvol | 283.610 | ml/mol | McGowan Method |
| pc | 1653.80 | kPa | Joback Method |
| tb | 701.43 | K | Cheméo Relay (1.0) |
| tc | 1000.19 | K | Cheméo Relay (1.0) |
| tf | 424.02 | K | Cheméo Relay (1.0) |
| vc | 1.018 | m3/kmol | Cheméo Relay (1.0) |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 855.62 | J/mol×K | 840.08 | Joback Method |
| cpg | 873.99 | J/mol×K | 880.11 | Joback Method |
| cpg | 890.91 | J/mol×K | 920.13 | Joback Method |
| cpg | 906.51 | J/mol×K | 960.16 | Joback Method |
| cpg | 920.92 | J/mol×K | 1000.18 | Joback Method |
| cpg | 934.30 | J/mol×K | 1040.21 | Joback Method |
| cpg | 946.78 | J/mol×K | 1080.24 | Joback Method |

# Sources

| | |
|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Cheméo Relay (1.0):** | |
| **Cheméo Relay (1.0, beta):** | |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C129737&Units=SI |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |

# Legend

| | |
|---|---|
| **af:** | Acentric Factor |
| **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 |
| **ie:** | Ionization energy |
| **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 |