# p,p'-Dioctyldiphenylamine

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|---|---|
| **Other names:** | p,p-Dioctyldiphenylamine |
| | p,p'-Dioctyldiphenylamine |
| | Bis(p-octylphenyl)amine |
| | Diphenylamine, 4,4'-dioctyl- |
| | 4,4'-Dioctyldiphenylamine |
| | 4,4'-Dioctylphenylamine |
| | 4-Octyl-N-(4-octylphenyl)benzenamine |
| | Naugalube 438 |
| | Vanox ODP |
| | Bis(4-octylphenyl)amine |
| | NSC 79268 |
| **Inchi:** | InChI=1S/C28H43N/c1-3-5-7-9-11-13-15-25-17-21-27(22-18-25)29-28-23-19-26(20-24-2 |
| **InchiKey:** | QAPVYZRWKDXNDK-UHFFFAOYSA-N |
| **Formula:** | C28H43N |
| **SMILES:** | CCCCCCCCc1ccc(Nc2ccc(CCCCCCCC)cc2)cc1 |
| **Mol. weight [g/mol]:** | 393.66 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 1.1173 | | Cheméo Relay (1.0) |
| gf | 479.83 | kJ/mol | Joback Method |
| hf | -179.36 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 60.68 | kJ/mol | Joback Method |
| hvap | 135.69 | kJ/mol | Cheméo Relay (1.0) |
| ie | 7.40 | eV | Cheméo Relay (1.0) |
| log10ws | -9.04 | | Cheméo Relay (1.0) |
| logp | 9.236 | | Crippen Method |
| mcvol | 367.840 | ml/mol | McGowan Method |
| pc | 940.37 | kPa | Joback Method |
| tb | 726.69 | K | Cheméo Relay (1.0) |
| tc | 969.03 | K | Cheméo Relay (1.0) |
| tf | 333.24 | K | Cheméo Relay (1.0) |
| vc | 1.377 | m3/kmol | Cheméo Relay (1.0) |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1232.80 | J/mol×K | 953.53 | Joback Method |
| cpg | 1252.21 | J/mol×K | 989.51 | Joback Method |
| cpg | 1270.37 | J/mol×K | 1025.48 | Joback Method |
| cpg | 1287.37 | J/mol×K | 1061.46 | Joback Method |
| cpg | 1303.29 | J/mol×K | 1097.44 | Joback Method |
| cpg | 1318.24 | J/mol×K | 1133.41 | Joback Method |
| cpg | 1332.30 | J/mol×K | 1169.39 | Joback Method |

# Sources

**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=C101677&Units=SI
**Joback Method:** https://en.wikipedia.org/wiki/Joback_method
**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# 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