# Benzamide, 2,5-difluoro-N-hexadecyl-

**Inchi:** InChI=1S/C23H37F2NO/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-18-26-23(27)21-19-20(24
**InchiKey:** AYZZXPKDUBZPCX-UHFFFAOYSA-N
**Formula:** C23H37F2NO
**SMILES:** CCCCCCCCCCCCCCCCCNC(=O)c1cc(F)ccc1F
**Mol. weight [g/mol]:** 381.54

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -193.22 | kJ/mol | Joback Method |
| hf | -755.79 | kJ/mol | Joback Method |
| hfus | 61.45 | kJ/mol | Joback Method |
| hvap | 81.94 | kJ/mol | Joback Method |
| log10ws | -8.76 | | Crippen Method |
| logp | 7.176 | | Crippen Method |
| mcvol | 326.260 | ml/mol | McGowan Method |
| pc | 1014.89 | kPa | Joback Method |
| rinpol | 2799.00 | | NIST Webbook |
| rinpol | 2799.00 | | NIST Webbook |
| tb | 864.86 | K | Joback Method |
| tc | 1059.83 | K | Joback Method |
| tf | 504.20 | K | Joback Method |
| vc | 1.292 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1053.23 | J/mol×K | 864.86 | Joback Method |
| cpg | 1071.26 | J/mol×K | 897.35 | Joback Method |
| cpg | 1088.21 | J/mol×K | 929.85 | Joback Method |
| cpg | 1104.13 | J/mol×K | 962.34 | Joback Method |
| cpg | 1119.08 | J/mol×K | 994.84 | Joback Method |
| cpg | 1133.10 | J/mol×K | 1027.33 | Joback Method |
| cpg | 1146.24 | J/mol×K | 1059.83 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U407596&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

| | |
|---|---|
| **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 |