# Butanamide, N-(4-fluorophenyl)-2,2,3,3,4,4,4-heptafluoro-

**Inchi:** InChI=1S/C10H5F8NO/c11-5-1-3-6(4-2-5)19-7(20)8(12,13)9(14,15)10(16,17)18/h1-4H,(H

**InchiKey:** ISPPNGLLDAPGTE-UHFFFAOYSA-N

**Formula:** C10H5F8NO

**SMILES:** O=C(Nc1ccc(F)cc1)C(F)(F)C(F)(F)C(F)(F)F

**Mol. weight [g/mol]:** 307.14

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -1453.39 | kJ/mol | Joback Method |
| hf | -1678.91 | kJ/mol | Joback Method |
| hfus | 24.40 | kJ/mol | Joback Method |
| hvap | 43.55 | kJ/mol | Joback Method |
| log10ws | -4.13 | | Crippen Method |
| logp | 3.597 | | Crippen Method |
| mcvol | 153.710 | ml/mol | McGowan Method |
| pc | 2291.52 | kPa | Joback Method |
| rinpol | 1034.00 | | NIST Webbook |
| tb | 548.37 | K | Joback Method |
| tc | 724.47 | K | Joback Method |
| tf | 355.97 | K | Joback Method |
| vc | 0.639 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 399.93 | J/mol×K | 548.37 | Joback Method |
| cpg | 411.10 | J/mol×K | 577.72 | Joback Method |
| cpg | 421.37 | J/mol×K | 607.07 | Joback Method |
| cpg | 430.81 | J/mol×K | 636.42 | Joback Method |
| cpg | 439.46 | J/mol×K | 665.77 | Joback Method |
| cpg | 447.39 | J/mol×K | 695.12 | Joback Method |
| cpg | 454.65 | J/mol×K | 724.47 | 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=U307275&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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |