# Pentafluoropropanamide, N-heptyl-N-octyl-

**Inchi:** InChI=1S/C18H32F5NO/c1-3-5-7-9-11-13-15-24(14-12-10-8-6-4-2)16(25)17(19,20)18(21
**InchiKey:** DMTPCEJIUXLIPI-UHFFFAOYSA-N
**Formula:** C18H32F5NO
**SMILES:** CCCCCCCCN(CCCCCCC)C(=O)C(F)(F)C(F)(F)F
**Mol. weight [g/mol]:** 373.44

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -885.83 | kJ/mol | Joback Method |
| hf | -1457.95 | kJ/mol | Joback Method |
| hfus | 47.57 | kJ/mol | Joback Method |
| hvap | 57.77 | kJ/mol | Joback Method |
| log10ws | -6.68 | | Crippen Method |
| logp | 6.344 | | Crippen Method |
| mcvol | 284.880 | ml/mol | McGowan Method |
| pc | 1059.64 | kPa | Joback Method |
| rinpol | 1803.00 | | NIST Webbook |
| rinpol | 1803.00 | | NIST Webbook |
| tb | 667.44 | K | Joback Method |
| tc | 824.39 | K | Joback Method |
| tf | 382.81 | K | Joback Method |
| vc | 1.135 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 842.74 | J/mol×K | 667.44 | Joback Method |
| cpg | 860.35 | J/mol×K | 693.60 | Joback Method |
| cpg | 877.09 | J/mol×K | 719.76 | Joback Method |
| cpg | 893.00 | J/mol×K | 745.92 | Joback Method |
| cpg | 908.12 | J/mol×K | 772.07 | Joback Method |
| cpg | 922.51 | J/mol×K | 798.23 | Joback Method |
| cpg | 936.20 | J/mol×K | 824.39 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U308514&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 |