# Heptafluorobutanamide, N,N-dinonyl-

**Inchi:** InChI=1S/C22H38F7NO/c1-3-5-7-9-11-13-15-17-30(18-16-14-12-10-8-6-4-2)19(31)20(23
**InchiKey:** GJIHYWPLADFLCD-UHFFFAOYSA-N
**Formula:** C22H38F7NO
**SMILES:** CCCCCCCCCN(CCCCCCCCC)C(=O)C(F)(F)C(F)(F)C(F)(F)F
**Mol. weight [g/mol]:** 465.53

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -1238.93 | kJ/mol | Joback Method |
| hf | -1941.48 | kJ/mol | Joback Method |
| hfus | 56.67 | kJ/mol | Joback Method |
| hvap | 63.75 | kJ/mol | Joback Method |
| log10ws | -8.67 | | Crippen Method |
| logp | 8.149 | | Crippen Method |
| mcvol | 344.780 | ml/mol | McGowan Method |
| pc | 803.88 | kPa | Joback Method |
| rinpol | 2098.00 | | NIST Webbook |
| rinpol | 2098.00 | | NIST Webbook |
| tb | 754.27 | K | Joback Method |
| tc | 923.44 | K | Joback Method |
| tf | 431.49 | K | Joback Method |
| vc | 1.385 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1097.18 | J/mol×K | 754.27 | Joback Method |
| cpg | 1116.36 | J/mol×K | 782.46 | Joback Method |
| cpg | 1134.51 | J/mol×K | 810.66 | Joback Method |
| cpg | 1151.71 | J/mol×K | 838.85 | Joback Method |
| cpg | 1168.02 | J/mol×K | 867.05 | Joback Method |
| cpg | 1183.53 | J/mol×K | 895.24 | Joback Method |
| cpg | 1198.31 | J/mol×K | 923.44 | Joback Method |

# Sources

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|---|---|
| **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 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U308277&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |

# 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 |