# Methanone, (2-fluorophenyl)[2-(methylamino)-5-nitrophenyl]-

**Other names:** 2'-Fluoro-2-methylamino-5-nitrobenzophenone
2-methylamino-5-nitro-2'-fluor-benzophenone
2-Methylamino-5-nitro-2'-fluorobenzophenone
Benzophenone, 2'-fluoro-2-methylamino-5-nitro
Flunitrazepam benzophenone

**Inchi:** InChI=1S/C14H11FN2O3/c1-16-13-7-6-9(17(19)20)8-11(13)14(18)10-4-2-3-5-12(10)15/h

**InchiKey:** GVXPKRIRHDRCGY-UHFFFAOYSA-N

**Formula:** C14H11FN2O3

**SMILES:** CNc1ccc([N+](=O)[O-])cc1C(=O)c1ccccc1F

**Mol. weight [g/mol]:** 274.25

**CAS:** 735-06-8

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 64.14 | kJ/mol | Joback Method |
| hf | -159.62 | kJ/mol | Joback Method |
| hfus | 40.07 | kJ/mol | Joback Method |
| hvap | 82.25 | kJ/mol | Joback Method |
| log10ws | -4.42 | | Crippen Method |
| logp | 3.007 | | Crippen Method |
| mcvol | 191.340 | ml/mol | McGowan Method |
| pc | 2764.26 | kPa | Joback Method |
| rinpol | 2350.00 | | NIST Webbook |
| rinpol | 2430.00 | | NIST Webbook |
| rinpol | 2370.00 | | NIST Webbook |
| rinpol | 2370.00 | | NIST Webbook |
| rinpol | 2350.00 | | NIST Webbook |
| rinpol | 2338.00 | | NIST Webbook |
| rinpol | 2383.00 | | NIST Webbook |
| rinpol | 2370.00 | | NIST Webbook |
| tb | 843.17 | K | Joback Method |
| tc | 1095.55 | K | Joback Method |
| tf | 584.73 | K | Joback Method |
| vc | 0.745 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 538.91 | J/mol×K | 843.17 | Joback Method |
| cpg | 549.90 | J/mol×K | 885.23 | Joback Method |
| cpg | 559.82 | J/mol×K | 927.30 | Joback Method |
| cpg | 568.73 | J/mol×K | 969.36 | Joback Method |
| cpg | 576.72 | J/mol×K | 1011.42 | Joback Method |
| cpg | 583.85 | J/mol×K | 1053.49 | Joback Method |
| cpg | 590.19 | J/mol×K | 1095.55 | Joback Method |

# Sources

**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
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C735068&Units=SI

# 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