# Benzenesulfonamide, N-(4-nitrophenyl)-

**Other names:** N-p-Nitro-phenyl-benzene-sulfonamide
**Inchi:** InChI=1S/C12H10N2O4S/c15-14(16)11-8-6-10(7-9-11)13-19(17,18)12-4-2-1-3-5-12/h1-9
**InchiKey:** SWSJPCDGJYPPCS-UHFFFAOYSA-N
**Formula:** C12H10N2O4S
**SMILES:** O=[N+]([O-])c1ccc(NS(=O)(=O)c2ccccc2)cc1
**Mol. weight [g/mol]:** 278.28
**CAS:** 1829-81-8

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -78.25 | kJ/mol | Joback Method |
| hf | -240.06 | kJ/mol | Joback Method |
| hfus | 42.37 | kJ/mol | Joback Method |
| hvap | 89.18 | kJ/mol | Joback Method |
| log10ws | -3.63 | | Crippen Method |
| logp | 2.396 | | Crippen Method |
| mcvol | 187.910 | ml/mol | McGowan Method |
| pc | 4200.18 | kPa | Joback Method |
| tb | 782.09 | K | Joback Method |
| tc | 1038.28 | K | Joback Method |
| tf | 525.19 | K | Joback Method |
| vc | 0.735 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 504.42 | J/mol×K | 782.09 | Joback Method |
| cpg | 516.18 | J/mol×K | 824.79 | Joback Method |
| cpg | 526.57 | J/mol×K | 867.49 | Joback Method |
| cpg | 535.64 | J/mol×K | 910.19 | Joback Method |
| cpg | 543.45 | J/mol×K | 952.89 | Joback Method |
| cpg | 550.06 | J/mol×K | 995.59 | Joback Method |
| cpg | 555.53 | J/mol×K | 1038.28 | Joback Method |

# Sources

| | |
|---|---|
| **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=C1829818&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# 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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |