# 2,4-Difluoro-6-nitroacetanilide

**Other names**: 2',4'-difluoro-6'-nitroacetanilide; Acetamide, N-(2,4-difluoro-6-nitrophenyl)-.

**InChI**: InChI=1S/C8H6F2N2O3/c1-4(13)11-8-6(10)2-5(9)3-7(8)12(14)15/h2-3H,1H3,(H,11,13)

**InChI Key**: ZBECJQMWJBFRCL-UHFFFAOYSA-N

**Formula**: C8H6F2N2O3

**SMILES**: CC(=O)Nc1c(F)cc(F)cc1[N+](=O)[O-]

**Molecular Weight**: 216.14

**CAS**: 441-30-5


## Physical Properties

| Property | Value | Unit | Source |
|---|---|---|---|
| $\Delta_f G°$ | -293.60 | kJ/mol | Joback Method |
| $\Delta_f H°_{gas}$ | -468.42 | kJ/mol | Joback Method |
| $\Delta_{fus} H°$ | 33.57 | kJ/mol | Joback Method |
| $\Delta_{vap} H°$ | 65.80 | kJ/mol | Joback Method |
| $logP_{oct/wat}$ | 1.83 | | Crippen Method |
| $P_c$ | 3452.08 | kPa | Joback Method |
| $T_{boil}$ | 678.48 | K | Joback Method |
| $T_c$ | 906.48 | K | Joback Method |
| $T_{fus}$ | 491.28 | K | Joback Method |
| $V_c$ | 0.53 | $m^3$/kg-mol | Joback Method |

## Temperature Dependent Properties

| Property | Value | Unit | Temperature (K) | Source |
|---|---|---|---|---|
| $C_{p,gas}$ | 333.05 | J/mol×K | 678.48 | Joback Method |

## Sources

**Joback Method**: https://en.wikipedia.org/wiki/Joback_method

**NIST Webbook**: http://webbook.nist.gov/cgi/inchi/InChI=1S/C8H6F2N2O3/c1-4(13)11-8-6(10)2-5(9)3-7(8)12(14)15/h2-3H,1H3,(H,11,13)

**Crippen Method**: http://pubs.acs.org/doi/abs/10.1021/ci990307l

## Legend

$\mathbf{C_{p,gas}}$: Ideal gas heat capacity (J/mol×K).
$\mathbf{\Delta_f G°}$: Standard Gibbs free energy of formation (kJ/mol).
$\mathbf{\Delta_f H°_{gas}}$: Enthalpy of formation at standard conditions (kJ/mol).
$\mathbf{\Delta_{fus} H°}$: Enthalpy of fusion at standard conditions (kJ/mol).
$\mathbf{\Delta_{vap} H°}$: Enthalpy of vaporization at standard conditions (kJ/mol).
$\mathbf{\mathit{log}P_{oct/wat}}$: Octanol/Water partition coefficient .
$\mathbf{P_c}$: Critical Pressure (kPa).
$\mathbf{T_{boil}}$: Normal Boiling Point Temperature (K).
$\mathbf{T_c}$: Critical Temperature (K).
$\mathbf{T_{fus}}$: Normal melting (fusion) point (K).
$\mathbf{V_c}$: Critical Volume ($m^3$/kg-mol).