

# PROPANAMIDE, N-PHENYL-

|                      |                                                                     |
|----------------------|---------------------------------------------------------------------|
| Other names:         | N-Phenylpropionamide<br>Propionamide, N-phenyl-<br>Propionanilide   |
| Inchi:               | InChI=1S/C9H11NO/c1-2-9(11)10-8-6-4-3-5-7-8/h3-7H,2H2,1H3,(H,10,11) |
| InchiKey:            | ZTHRQJQJODGZHV-UHFFFAOYSA-N                                         |
| Formula:             | C9H11NO                                                             |
| SMILES:              | CCC(=O)Nc1ccccc1                                                    |
| Mol. weight [g/mol]: | 149.19                                                              |

## Physical Properties

| Property code | Value   | Unit   | Source                               |
|---------------|---------|--------|--------------------------------------|
| hf            | -144.79 | kJ/mol | Cheméo Relay (1.0)                   |
| hfus          | 19.81   | kJ/mol | Joback Method                        |
| hvap          | 62.95   | kJ/mol | Cheméo Relay (1.0)                   |
| ie            | 8.30    | eV     | Cheméo Relay (1.0)                   |
| log10ws       | -1.92   |        | Aqueous Solubility Prediction Method |
| logp          | 2.035   |        | Crippen Method                       |
| mcvol         | 125.460 | ml/mol | McGowan Method                       |
| tb            | 525.22  | K      | Cheméo Relay (1.0)                   |
| tc            | 766.71  | K      | Cheméo Relay (1.0)                   |
| tf            | 378.65  | K      | Aqueous Solubility Prediction Method |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 278.38 | J/mol×K | 536.04          | Joback Method |
| cpg           | 291.41 | J/mol×K | 572.52          | Joback Method |
| cpg           | 303.61 | J/mol×K | 609.00          | Joback Method |
| cpg           | 315.00 | J/mol×K | 645.47          | Joback Method |
| cpg           | 325.61 | J/mol×K | 681.95          | Joback Method |
| cpg           | 335.50 | J/mol×K | 718.43          | Joback Method |
| cpg           | 344.69 | J/mol×K | 754.91          | Joback Method |

# Sources

|                                              |                                                                                                                                                                                                                         |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>NIST Webbook:</b>                         | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C620713&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C620713&amp;Units=SI</a>                                                                               |
| <b>Joback Method:</b>                        | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                                                                                                   |
| <b>McGowan Method:</b>                       | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                                                                                                   |
| <b>Crippen Method:</b>                       | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>                                                                                                               |
| <b>Cheméo Relay (1.0):</b>                   |                                                                                                                                                                                                                         |
| <b>Cheméo Relay (1.0, beta):</b>             |                                                                                                                                                                                                                         |
| <b>Aqueous Solubility Prediction Method:</b> | <a href="http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx">http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx</a> |

# Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>hf:</b>      | Enthalpy of formation at standard conditions    |
| <b>hfus:</b>    | Enthalpy of fusion at standard conditions       |
| <b>hvap:</b>    | Enthalpy of vaporization at standard conditions |
| <b>ie:</b>      | Ionization energy                               |
| <b>log10ws:</b> | Log10 of Water solubility in mol/l              |
| <b>logp:</b>    | Octanol/Water partition coefficient             |
| <b>mcvol:</b>   | McGowan's characteristic volume                 |
| <b>tb:</b>      | Normal Boiling Point Temperature                |
| <b>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |

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