

# ISONICOTINONITRILE 1-OXIDE

|                      |                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------|
| Other names:         | 4-Cyanopyridine-N-oxide<br>Isonicotinonitrile, 1-oxide<br>4-Cyanopyridine oxide<br>4-Cyanopyridine 1-oxide |
| Inchi:               | InChI=1S/C6H4N2O/c7-5-6-1-3-8(9)4-2-6/h1-4H                                                                |
| InchiKey:            | QNCSFBSIWVBTHE-UHFFFAOYSA-N                                                                                |
| Formula:             | C6H4N2O                                                                                                    |
| SMILES:              | N#Cc1cc[n+][O-]cc1                                                                                         |
| Mol. weight [g/mol]: | 120.11                                                                                                     |

## Physical Properties

| Property code | Value         | Unit   | Source                   |
|---------------|---------------|--------|--------------------------|
| af            | 0.4037        |        | Cheméo Relay (1.0)       |
| affp          | 873.40        | kJ/mol | NIST Webbook             |
| basg          | 842.70        | kJ/mol | NIST Webbook             |
| gf            | 320.44        | kJ/mol | Cheméo Relay (1.0, beta) |
| hf            | 285.37        | kJ/mol | Cheméo Relay (1.0)       |
| hsub          | 104.40 ± 4.30 | kJ/mol | NIST Webbook             |
| hvap          | 73.16         | kJ/mol | Cheméo Relay (1.0)       |
| ie            | 8.95 ± 0.02   | eV     | NIST Webbook             |
| log10ws       | -0.02         |        | Cheméo Relay (1.0)       |
| logp          | 0.192         |        | Crippen Method           |
| mcvol         | 88.870        | ml/mol | McGowan Method           |
| pc            | 4527.18       | kPa    | Cheméo Relay (1.0, beta) |
| tb            | 520.46        | K      | Cheméo Relay (1.0)       |
| tc            | 742.53        | K      | Cheméo Relay (1.0)       |
| tf            | 483.52        | K      | Cheméo Relay (1.0)       |

## Sources

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

NIST Webbook: <http://webbook.nist.gov/cgi/cbook.cgi?ID=C14906593&Units=SI>

McGowan Method: <http://link.springer.com/article/10.1007/BF02311772>

Crippen Method:

<http://pubs.acs.org/doi/abs/10.1021/ci990307l>

Crippen Method:

[https://www.chemeo.com/doc/models/crippen\\_log10ws](https://www.chemeo.com/doc/models/crippen_log10ws)

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>af:</b>      | Acentric Factor                                 |
| <b>affp:</b>    | Proton affinity                                 |
| <b>basg:</b>    | Gas basicity                                    |
| <b>gf:</b>      | Standard Gibbs free energy of formation         |
| <b>hf:</b>      | Enthalpy of formation at standard conditions    |
| <b>hsub:</b>    | Enthalpy of sublimation 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>pc:</b>      | Critical Pressure                               |
| <b>tb:</b>      | Normal Boiling Point Temperature                |
| <b>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |

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