

# AMIDOSULFONIC ACID

|                      |                                          |
|----------------------|------------------------------------------|
| Other names:         | Amidosulfuric acid                       |
|                      | Aminosulfonic acid                       |
|                      | Aminosulfuric acid                       |
|                      | Imidosulfonic acid                       |
|                      | Jumbo                                    |
|                      | Kyselina amidosulfonova                  |
|                      | Kyselina sulfaminova                     |
|                      | NSC 1871                                 |
|                      | Sulfamic acid                            |
|                      | Sulfamidic acid                          |
|                      | Sulfaminic acid                          |
|                      | Sulphamic acid                           |
|                      | UN 2967                                  |
|                      | sulphamidic acid                         |
| Inchi:               | InChI=1S/H3NO3S/c1-5(2,3)4/h(H3,1,2,3,4) |
| InchiKey:            | IIACRCGMVDHOTQ-UHFFFAOYSA-N              |
| Formula:             | H3SNO3                                   |
| SMILES:              | NS(=O)(=O)O                              |
| Mol. weight [g/mol]: | 97.09                                    |
| CAS:                 | 5329-14-6                                |

## Physical Properties

| Property code | Value  | Unit   | Source             |
|---------------|--------|--------|--------------------|
| hfus          | 16.42  | kJ/mol | Joback Method      |
| ie            | 11.79  | eV     | Cheméo Relay (1.0) |
| logp          | -1.252 |        | Crippen Method     |
| mcvol         | 54.800 | ml/mol | McGowan Method     |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 101.71 | J/mol×K | 411.89          | Joback Method |
| cpg           | 105.18 | J/mol×K | 441.49          | Joback Method |
| cpg           | 108.56 | J/mol×K | 471.08          | Joback Method |

|     |        |         |        |               |
|-----|--------|---------|--------|---------------|
| cpg | 111.83 | J/mol×K | 500.68 | Joback Method |
| cpg | 114.98 | J/mol×K | 530.28 | Joback Method |
| cpg | 118.02 | J/mol×K | 559.87 | Joback Method |
| cpg | 120.92 | J/mol×K | 589.47 | Joback Method |

## Correlations

| Information                 | Value                         |
|-----------------------------|-------------------------------|
| Property code               | pvap                          |
| Equation                    | $\ln(P_{vp}) = A + B/(T + C)$ |
| Coeff. A                    | -1.75452e+00                  |
| Coeff. B                    | -1.57610e+03                  |
| Temperature range (K), min. | 293.15                        |
| Temperature range (K), max. | 373.15                        |

## Sources

|                                      |                                                                                                                                                                                         |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Joback Method:                       | <a href="https://en.wikipedia.org/wiki/Joback_method">https://en.wikipedia.org/wiki/Joback_method</a>                                                                                   |
| McGowan Method:                      | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                                                                   |
| Crippen Method:                      | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>                                                                               |
| Crippen Method:                      | <a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>                                                                       |
| Cheméo Relay (1.0):                  |                                                                                                                                                                                         |
| Cheméo Relay (1.0, beta):            |                                                                                                                                                                                         |
| The Yaws Handbook of Vapor Pressure: | <a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a> |
| NIST Webbook:                        | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C5329146&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C5329146&amp;Units=SI</a>                                             |

## Legend

|        |                                           |
|--------|-------------------------------------------|
| cpg:   | Ideal gas heat capacity                   |
| hfus:  | Enthalpy of fusion at standard conditions |
| ie:    | Ionization energy                         |
| logp:  | Octanol/Water partition coefficient       |
| mcvol: | McGowan's characteristic volume           |
| pvap:  | Vapor pressure                            |

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