

# 6-BROMOHEXANENITRILE

|                      |                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------|
| Other names:         | 5-Bromopentyl cyanide<br>6-Bromocapronitrile<br>6-Bromohexanonitrile<br>Hexanenitrile, 6-bromo- |
| Inchi:               | InChI=1S/C6H10BrN/c7-5-3-1-2-4-6-8/h1-5H2                                                       |
| InchiKey:            | PHOSWLARCIBBJZ-UHFFFAOYSA-N                                                                     |
| Formula:             | C6H10BrN                                                                                        |
| SMILES:              | N#CCCCCBr                                                                                       |
| Mol. weight [g/mol]: | 176.06                                                                                          |

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| af            | 0.5723  |        | Cheméo Relay (1.0) |
| hf            | 9.02    | kJ/mol | Cheméo Relay (1.0) |
| hfus          | 18.09   | kJ/mol | Joback Method      |
| hvap          | 63.35   | kJ/mol | Cheméo Relay (1.0) |
| ie            | 10.86   | eV     | Cheméo Relay (1.0) |
| logp          | 2.465   |        | Crippen Method     |
| mcvol         | 114.280 | ml/mol | McGowan Method     |
| pc            | 3265.31 | kPa    | Joback Method      |
| tb            | 511.40  | K      | Cheméo Relay (1.0) |
| tc            | 707.42  | K      | Cheméo Relay (1.0) |
| tf            | 264.92  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 222.60 | J/mol×K | 504.92          | Joback Method |
| cpg           | 231.51 | J/mol×K | 539.11          | Joback Method |
| cpg           | 239.95 | J/mol×K | 573.29          | Joback Method |
| cpg           | 247.94 | J/mol×K | 607.48          | Joback Method |
| cpg           | 255.51 | J/mol×K | 641.67          | Joback Method |
| cpg           | 262.67 | J/mol×K | 675.85          | Joback Method |
| cpg           | 269.45 | J/mol×K | 710.04          | Joback Method |

# Sources

|                                  |                                                                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <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>Crippen Method:</b>           | <a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.com/doc/models/crippen_log10ws</a>                           |
| <b>Cheméo Relay (1.0):</b>       |                                                                                                                                             |
| <b>Cheméo Relay (1.0, beta):</b> |                                                                                                                                             |
| <b>NIST Webbook:</b>             | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C6621596&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C6621596&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>                       |

# Legend

|                |                                                 |
|----------------|-------------------------------------------------|
| <b>af:</b>     | Acentric Factor                                 |
| <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>logp:</b>   | Octanol/Water partition coefficient             |
| <b>mccvol:</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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