

# BENZYL ISOCYANATE

|                      |                                                   |
|----------------------|---------------------------------------------------|
| Other names:         | Benzene, (isocyanatomethyl)-                      |
| Inchi:               | InChI=1S/C8H7NO/c10-7-9-6-8-4-2-1-3-5-8/h1-5H,6H2 |
| InchiKey:            | YDNLNVZZTACNJX-UHFFFAOYSA-N                       |
| Formula:             | C8H7NO                                            |
| SMILES:              | O=C=NCc1ccccc1                                    |
| Mol. weight [g/mol]: | 133.15                                            |

## Physical Properties

| Property code | Value   | Unit   | Source             |
|---------------|---------|--------|--------------------|
| hf            | 37.55   | kJ/mol | Cheméo Relay (1.0) |
| hvap          | 48.44   | kJ/mol | Cheméo Relay (1.0) |
| ie            | 9.08    | eV     | Cheméo Relay (1.0) |
| logp          | 1.522   |        | Crippen Method     |
| mcvol         | 107.070 | ml/mol | McGowan Method     |
| pc            | 4000.70 | kPa    | Joback Method      |
| rinpol        | 1137.00 |        | NIST Webbook       |
| rinpol        | 1125.80 |        | NIST Webbook       |
| rinpol        | 1137.00 |        | NIST Webbook       |
| rinpol        | 1125.80 |        | NIST Webbook       |
| tb            | 478.93  | K      | Cheméo Relay (1.0) |
| tc            | 680.55  | K      | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value | Unit   | Temperature [K] | Source       |
|---------------|-------|--------|-----------------|--------------|
| hvapt         | 42.30 | kJ/mol | 363.00          | NIST Webbook |

## Sources

|                |                                                                                                                                             |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| NIST Webbook:  | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C3173566&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C3173566&amp;Units=SI</a> |
| Joback Method: | <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>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> |                                                                                                                       |

## Legend

|                          |                                                 |
|--------------------------|-------------------------------------------------|
| <b>hf:</b>               | Enthalpy of formation at standard conditions    |
| <b>h<sub>vap</sub>:</b>  | Enthalpy of vaporization at standard conditions |
| <b>h<sub>vapt</sub>:</b> | Enthalpy of vaporization at a given temperature |
| <b>ie:</b>               | Ionization energy                               |
| <b>log<sub>p</sub>:</b>  | Octanol/Water partition coefficient             |
| <b>mcvol:</b>            | McGowan's characteristic volume                 |
| <b>pc:</b>               | Critical Pressure                               |
| <b>rinpol:</b>           | Non-polar retention indices                     |
| <b>tb:</b>               | Normal Boiling Point Temperature                |
| <b>tc:</b>               | Critical Temperature                            |

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