

# 4-Methylphenol, n-butyl ether

|                      |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| Other names:         | n-Butyl p-tolyl ether<br>4-(n-Butoxy)toluene<br>Benzene, 1-butoxy-4-methyl-<br>butyl p-tolyl ether |
| Inchi:               | InChI=1S/C11H16O/c1-3-4-9-12-11-7-5-10(2)6-8-11/h5-8H,3-4,9H2,1-2H3                                |
| InchiKey:            | AGARRLZBNOJWLG-UHFFFAOYSA-N                                                                        |
| Formula:             | C11H16O                                                                                            |
| SMILES:              | CCCCOc1ccc(C)cc1                                                                                   |
| Mol. weight [g/mol]: | 164.25                                                                                             |

## Physical Properties

| Property code | Value   | Unit    | Source             |
|---------------|---------|---------|--------------------|
| af            | 0.5192  |         | Cheméo Relay (1.0) |
| gf            | 39.52   | kJ/mol  | Joback Method      |
| hf            | -182.10 | kJ/mol  | Cheméo Relay (1.0) |
| hfus          | 19.09   | kJ/mol  | Joback Method      |
| hvap          | 56.34   | kJ/mol  | Cheméo Relay (1.0) |
| ie            | 7.92    | eV      | Cheméo Relay (1.0) |
| log10ws       | -3.66   |         | Cheméo Relay (1.0) |
| logp          | 3.174   |         | Crippen Method     |
| mcvol         | 147.960 | ml/mol  | McGowan Method     |
| pc            | 2563.69 | kPa     | Joback Method      |
| tb            | 497.39  | K       | Cheméo Relay (1.0) |
| tc            | 694.79  | K       | Cheméo Relay (1.0) |
| tf            | 259.02  | K       | Cheméo Relay (1.0) |
| vc            | 0.554   | m3/kmol | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value  | Unit    | Temperature [K] | Source        |
|---------------|--------|---------|-----------------|---------------|
| cpg           | 326.06 | J/mol×K | 505.16          | Joback Method |
| cpg           | 341.32 | J/mol×K | 538.75          | Joback Method |
| cpg           | 355.85 | J/mol×K | 572.35          | Joback Method |
| cpg           | 369.68 | J/mol×K | 605.94          | Joback Method |

|       |           |         |        |               |
|-------|-----------|---------|--------|---------------|
| cpg   | 382.80    | J/mol×K | 639.54 | Joback Method |
| cpg   | 395.24    | J/mol×K | 673.13 | Joback Method |
| cpg   | 407.02    | J/mol×K | 706.73 | Joback Method |
| dvisc | 0.0019708 | Pa×s    | 274.90 | Joback Method |
| dvisc | 0.0010326 | Pa×s    | 313.28 | Joback Method |
| dvisc | 0.0006230 | Pa×s    | 351.65 | Joback Method |
| dvisc | 0.0004152 | Pa×s    | 390.03 | Joback Method |
| dvisc | 0.0002975 | Pa×s    | 428.41 | Joback Method |
| dvisc | 0.0002253 | Pa×s    | 466.78 | Joback Method |
| dvisc | 0.0001779 | Pa×s    | 505.16 | Joback Method |

## Pressure Dependent Properties

| Property code | Value         | Unit | Pressure [kPa] | Source       |
|---------------|---------------|------|----------------|--------------|
| tbrp          | 380.00 ± 1.00 | K    | 2.30           | NIST Webbook |

## Sources

Cheméo Relay (1.0, beta):

NIST Webbook:

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C10519069&Units=SI>

Joback Method:

[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)

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)

Cheméo Relay (1.0):

## Legend

|        |                                                 |
|--------|-------------------------------------------------|
| af:    | Acentric Factor                                 |
| cpg:   | Ideal gas heat capacity                         |
| dvisc: | Dynamic viscosity                               |
| gf:    | Standard Gibbs free energy of formation         |
| hf:    | Enthalpy of formation at standard conditions    |
| hfus:  | Enthalpy of fusion at standard conditions       |
| hvap:  | 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>tbrp:</b>    | Boiling point at reduced pressure   |
| <b>tc:</b>      | Critical Temperature                |
| <b>tf:</b>      | Normal melting (fusion) point       |
| <b>vc:</b>      | Critical Volume                     |

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