# BUTYL PENTYL CARBONATE

**Inchi:** InChI=1S/C10H20O3/c1-3-5-7-9-13-10(11)12-8-6-4-2/h3-9H2,1-2H3
**InchiKey:** FLIHROUXKOLBTC-UHFFFAOYSA-N
**Formula:** C10H20O3
**SMILES:** CCCCCOC(=O)OCCCC
**Mol. weight [g/mol]:** 188.27

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.6752 | | Cheméo Relay (1.0) |
| gf | -305.60 | kJ/mol | Joback Method |
| hf | -734.66 | kJ/mol | Cheméo Relay (1.0) |
| hfus | 25.63 | kJ/mol | Joback Method |
| hvap | 67.69 | kJ/mol | Cheméo Relay (1.0) |
| ie | 10.04 | eV | Cheméo Relay (1.0) |
| log10ws | -3.27 | | Cheméo Relay (1.0) |
| logp | 3.130 | | Crippen Method |
| mcvol | 165.070 | ml/mol | McGowan Method |
| pc | 2165.35 | kPa | Joback Method |
| tb | 490.10 | K | Cheméo Relay (1.0) |
| tc | 638.44 | K | Cheméo Relay (1.0) |
| tf | 206.84 | K | Cheméo Relay (1.0) |
| vc | 0.650 | m3/kmol | Cheméo Relay (1.0) |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 394.21 | J/mol×K | 526.91 | Joback Method |
| cpg | 408.16 | J/mol×K | 555.55 | Joback Method |
| cpg | 421.63 | J/mol×K | 584.18 | Joback Method |
| cpg | 434.61 | J/mol×K | 612.82 | Joback Method |
| cpg | 447.09 | J/mol×K | 641.45 | Joback Method |
| cpg | 459.09 | J/mol×K | 670.09 | Joback Method |
| cpg | 470.59 | J/mol×K | 698.72 | Joback Method |
| dvisc | 0.0023638 | Pa×s | 296.85 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0012078 | Pa×s | 335.19 | Joback Method |
| dvisc | 0.0007084 | Pa×s | 373.54 | Joback Method |
| dvisc | 0.0004589 | Pa×s | 411.88 | Joback Method |
| dvisc | 0.0003200 | Pa×s | 450.22 | Joback Method |
| dvisc | 0.0002362 | Pa×s | 488.57 | Joback Method |
| dvisc | 0.0001822 | Pa×s | 526.91 | Joback Method |

# Sources

**Cheméo Relay (1.0, beta):**

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C83073034&Units=SI

**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

**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
**ie:** Ionization energy
**log10ws:** Log10 of Water solubility in mol/l
**logp:** Octanol/Water partition coefficient
**mcvol:** McGowan's characteristic volume
**pc:** Critical Pressure
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**vc:** Critical Volume