# Butane, 1-(2-propenyloxy)-

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|---|---|
| **Other names:** | Ether, allyl butyl |
| | Allyl butyl ether |
| | Butyl allyl ether |
| | Allyl n-butyl ether |
| | 1-(allyloxy)butane |
| **Inchi:** | InChI=1S/C7H14O/c1-3-5-7-8-6-4-2/h4H,2-3,5-7H2,1H3 |
| **InchiKey:** | IBTLFDCPAJLATQ-UHFFFAOYSA-N |
| **Formula:** | C7H14O |
| **SMILES:** | C=CCOCCCC |
| **Mol. weight [g/mol]:** | 114.19 |
| **CAS:** | 3739-64-8 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -9.10 | kJ/mol | Joback Method |
| hf | -194.60 | kJ/mol | Joback Method |
| hfus | 13.79 | kJ/mol | Joback Method |
| hvap | 32.92 | kJ/mol | Joback Method |
| log10ws | -1.69 | | Crippen Method |
| logp | 1.989 | | Crippen Method |
| mcvol | 111.060 | ml/mol | McGowan Method |
| pc | 2875.03 | kPa | Joback Method |
| tb | 378.66 | K | Joback Method |
| tc | 546.37 | K | Joback Method |
| tf | 189.12 | K | Joback Method |
| vc | 0.426 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 204.11 | J/mol×K | 378.66 | Joback Method |
| cpg | 215.03 | J/mol×K | 406.61 | Joback Method |
| cpg | 225.59 | J/mol×K | 434.56 | Joback Method |
| cpg | 235.80 | J/mol×K | 462.52 | Joback Method |

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|---|---|---|---|---|
| cpg | 245.67 | J/mol×K | 490.47 | Joback Method |
| cpg | 255.20 | J/mol×K | 518.42 | Joback Method |
| cpg | 264.39 | J/mol×K | 546.37 | Joback Method |
| dvisc | 0.0032848 | Pa×s | 189.12 | Joback Method |
| dvisc | 0.0015105 | Pa×s | 220.71 | Joback Method |
| dvisc | 0.0008438 | Pa×s | 252.30 | Joback Method |
| dvisc | 0.0005365 | Pa×s | 283.89 | Joback Method |
| dvisc | 0.0003736 | Pa×s | 315.48 | Joback Method |
| dvisc | 0.0002778 | Pa×s | 347.07 | Joback Method |
| dvisc | 0.0002171 | Pa×s | 378.66 | Joback Method |

# Pressure Dependent Properties

| Property code | Value | Unit | Pressure [kPa] | Source |
|---|---|---|---|---|
| tbrp | 390.70 | K | 102.00 | NIST Webbook |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C3739648&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l
**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws
**Joback Method:** https://en.wikipedia.org/wiki/Joback_method
**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772

# Legend

**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
**log10ws:** Log10 of Water solubility in mol/l
**logp:** Octanol/Water partition coefficient
**mcvol:** McGowan's characteristic volume

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|---|---|
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tbrp:** | Boiling point at reduced pressure |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |