

# cis-1-Butenyl ethyl ether

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| Other names:         | 1-Butene, 1-ethoxy-, (Z)                               |
| Inchi:               | InChI=1S/C6H12O/c1-3-5-6-7-4-2/h5-6H,3-4H2,1-2H3/b6-5- |
| InchiKey:            | AQTYNINXYJFSHD-WAYWQWQTSA-N                            |
| Formula:             | C6H12O                                                 |
| SMILES:              | CCC=COCC                                               |
| Mol. weight [g/mol]: | 100.16                                                 |
| CAS:                 | 4884-01-9                                              |

## Physical Properties

| Property code | Value   | Unit    | Source         |
|---------------|---------|---------|----------------|
| gf            | -25.14  | kJ/mol  | Joback Method  |
| hf            | -182.17 | kJ/mol  | Joback Method  |
| hfus          | 12.69   | kJ/mol  | Joback Method  |
| hvap          | 31.32   | kJ/mol  | Joback Method  |
| log10ws       | -1.77   |         | Crippen Method |
| logp          | 1.947   |         | Crippen Method |
| mcvol         | 96.970  | ml/mol  | McGowan Method |
| pc            | 3231.98 | kPa     | Joback Method  |
| tb            | 363.26  | K       | Joback Method  |
| tc            | 536.57  | K       | Joback Method  |
| tf            | 174.53  | K       | Joback Method  |
| vc            | 0.369   | m3/kmol | Joback Method  |

## Temperature Dependent Properties

| Property code | Value     | Unit    | Temperature [K] | Source        |
|---------------|-----------|---------|-----------------|---------------|
| cpg           | 167.70    | J/mol×K | 363.26          | Joback Method |
| cpg           | 177.67    | J/mol×K | 392.14          | Joback Method |
| cpg           | 187.29    | J/mol×K | 421.03          | Joback Method |
| cpg           | 196.56    | J/mol×K | 449.91          | Joback Method |
| cpg           | 205.48    | J/mol×K | 478.80          | Joback Method |
| cpg           | 214.08    | J/mol×K | 507.68          | Joback Method |
| cpg           | 222.34    | J/mol×K | 536.57          | Joback Method |
| dvisc         | 0.0032729 | Pa×s    | 174.53          | Joback Method |

|       |           |      |        |               |
|-------|-----------|------|--------|---------------|
| dvisc | 0.0013962 | Pa×s | 205.99 | Joback Method |
| dvisc | 0.0007464 | Pa×s | 237.44 | Joback Method |
| dvisc | 0.0004620 | Pa×s | 268.89 | Joback Method |
| dvisc | 0.0003162 | Pa×s | 300.35 | Joback Method |
| dvisc | 0.0002325 | Pa×s | 331.80 | Joback Method |
| dvisc | 0.0001803 | Pa×s | 363.26 | Joback Method |

## Sources

|                        |                                                                                                                                             |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <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>                       |
| <b>NIST Webbook:</b>   | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C4884019&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C4884019&amp;Units=SI</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>                           |

## Legend

|                 |                                                 |
|-----------------|-------------------------------------------------|
| <b>cpg:</b>     | Ideal gas heat capacity                         |
| <b>dvisc:</b>   | Dynamic viscosity                               |
| <b>gf:</b>      | Standard Gibbs free energy of formation         |
| <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>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>tc:</b>      | Critical Temperature                            |
| <b>tf:</b>      | Normal melting (fusion) point                   |
| <b>vc:</b>      | Critical Volume                                 |

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