# 1,1,3-Triethoxybutane

**Inchi:** InChI=1S/C10H22O3/c1-5-11-9(4)8-10(12-6-2)13-7-3/h9-10H,5-8H2,1-4H3
**InchiKey:** MDIBXLWYZGZAKL-UHFFFAOYSA-N
**Formula:** C10H22O3
**SMILES:** CCOC(C)CC(OCC)OCC
**Mol. weight [g/mol]:** 190.28
**CAS:** 5870-82-6

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -286.56 | kJ/mol | Joback Method |
| hf | -656.95 | kJ/mol | Joback Method |
| hfus | 18.17 | kJ/mol | Joback Method |
| hvap | 44.31 | kJ/mol | Joback Method |
| log10ws | -1.99 | | Crippen Method |
| logp | 2.201 | | Crippen Method |
| mcvol | 169.370 | ml/mol | McGowan Method |
| pc | 2041.91 | kPa | Joback Method |
| ripol | 1310.00 | | NIST Webbook |
| tb | 494.58 | K | Joback Method |
| tc | 663.55 | K | Joback Method |
| tf | 239.15 | K | Joback Method |
| vc | 0.637 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 396.44 | J/mol×K | 494.58 | Joback Method |
| cpg | 411.49 | J/mol×K | 522.74 | Joback Method |
| cpg | 426.09 | J/mol×K | 550.90 | Joback Method |
| cpg | 440.23 | J/mol×K | 579.06 | Joback Method |
| cpg | 453.91 | J/mol×K | 607.23 | Joback Method |
| cpg | 467.11 | J/mol×K | 635.39 | Joback Method |
| cpg | 479.83 | J/mol×K | 663.55 | Joback Method |
| dvisc | 0.0048621 | Pa×s | 239.15 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0016672 | Pa×s | 281.72 | Joback Method |
| dvisc | 0.0007571 | Pa×s | 324.29 | Joback Method |
| dvisc | 0.0004130 | Pa×s | 366.87 | Joback Method |
| dvisc | 0.0002555 | Pa×s | 409.44 | Joback Method |
| dvisc | 0.0001731 | Pa×s | 452.01 | Joback Method |
| dvisc | 0.0001253 | Pa×s | 494.58 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C5870826&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 |
| **pc:** | Critical Pressure |
| **ripol:** | Polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |