# 1,3-Dioxolane, 2,2-dimethyl-4-(tert-butyloxymethyl)-

**Inchi:** InChI=1S/C10H20O3/c1-9(2,3)11-6-8-7-12-10(4,5)13-8/h8H,6-7H2,1-5H3
**InchiKey:** MHVCAGULIQFGCK-UHFFFAOYSA-N
**Formula:** C10H20O3
**SMILES:** CC(C)(C)OCC1COC(C)(C)O1
**Mol. weight [g/mol]:** 188.26

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -217.73 | kJ/mol | Joback Method |
| hf | -599.32 | kJ/mol | Joback Method |
| hfus | 20.10 | kJ/mol | Joback Method |
| hvap | 46.78 | kJ/mol | Joback Method |
| log10ws | -2.00 | | Crippen Method |
| logp | 1.953 | | Crippen Method |
| mcvol | 158.510 | ml/mol | McGowan Method |
| pc | 2495.01 | kPa | Joback Method |
| rinpol | 1159.00 | | NIST Webbook |
| rinpol | 1159.00 | | NIST Webbook |
| tb | 512.14 | K | Joback Method |
| tc | 719.21 | K | Joback Method |
| tf | 310.81 | K | Joback Method |
| vc | 0.583 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 398.13 | J/mol×K | 512.14 | Joback Method |
| cpg | 416.50 | J/mol×K | 546.65 | Joback Method |
| cpg | 433.74 | J/mol×K | 581.16 | Joback Method |
| cpg | 449.95 | J/mol×K | 615.67 | Joback Method |
| cpg | 465.24 | J/mol×K | 650.19 | Joback Method |
| cpg | 479.71 | J/mol×K | 684.70 | Joback Method |
| cpg | 493.46 | J/mol×K | 719.21 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U381762&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

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|---|---|
| **cpg:** | Ideal gas heat capacity |
| **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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |