# 3-Oxabicyclo[3.2.1]octane-2,4-dione, 1,8,8-trimethyl-, (1S)-

**Other names:** (1S)-1,8,8-trimethyl-3-oxabicyclo[3.2.1]octane-2,4-dione
(d)-camphoric anhydride
**Inchi:** InChI=1S/C10H14O3/c1-9(2)6-4-5-10(9,3)8(12)13-7(6)11/h6H,4-5H2,1-3H3
**InchiKey:** VFZDNKRDYPTSTP-UHFFFAOYSA-N
**Formula:** C10H14O3
**SMILES:** CC12CCC(C(=O)OC1=O)C2(C)C
**Mol. weight [g/mol]:** 182.22
**CAS:** 595-31-3

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -219.37 | kJ/mol | Joback Method |
| hf | -513.71 | kJ/mol | Joback Method |
| hfus | 9.20 | kJ/mol | Joback Method |
| hvap | 48.42 | kJ/mol | Joback Method |
| log10ws | -1.71 | | Crippen Method |
| logp | 1.512 | | Crippen Method |
| mcvol | 139.050 | ml/mol | McGowan Method |
| pc | 3265.31 | kPa | Joback Method |
| tb | 608.62 | K | Joback Method |
| tc | 862.17 | K | Joback Method |
| tf | 437.87 | K | Joback Method |
| vc | 0.523 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 450.72 | J/mol×K | 777.65 | Joback Method |
| cpg | 466.20 | J/mol×K | 819.91 | Joback Method |
| cpg | 385.35 | J/mol×K | 608.62 | Joback Method |
| cpg | 402.73 | J/mol×K | 650.88 | Joback Method |
| cpg | 419.25 | J/mol×K | 693.14 | Joback Method |
| cpg | 435.16 | J/mol×K | 735.39 | Joback Method |
| cpg | 481.85 | J/mol×K | 862.17 | Joback Method |

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|---|---|---|---|---|
| hfust | 5.65 | kJ/mol | 493.60 | NIST Webbook |
| hfust | 8.70 | kJ/mol | 495.00 | NIST Webbook |

# Sources

| | |
|---|---|
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C595313&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# 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 |
| **hfust:** | Enthalpy of fusion at a given temperature |
| **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 |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |