# 1,3-Dioxane, 4-phenyl-

**Other names:** m-Dioxane, 4-phenyl-
4-Phenyl-m-dioxane
4-Phenyl-1,3-dioxane
**Inchi:** InChI=1S/C10H12O2/c1-2-4-9(5-3-1)10-6-7-11-8-12-10/h1-5,10H,6-8H2
**InchiKey:** RCJRILMVFLGCJY-UHFFFAOYSA-N
**Formula:** C10H12O2
**SMILES:** c1ccc(C2CCOCO2)cc1
**Mol. weight [g/mol]:** 164.20
**CAS:** 772-00-9

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -2.06 | kJ/mol | Joback Method |
| hf | -222.88 | kJ/mol | Joback Method |
| hfus | 23.49 | kJ/mol | Joback Method |
| hvap | 49.58 | kJ/mol | Joback Method |
| log10ws | -2.13 | | Crippen Method |
| logp | 2.122 | | Crippen Method |
| mcvol | 128.880 | ml/mol | McGowan Method |
| pc | 3628.97 | kPa | Joback Method |
| tb | 523.70 | K | NIST Webbook |
| tc | 773.22 | K | Joback Method |
| tf | 289.40 | K | Joback Method |
| vc | 0.463 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 302.25 | J/mol×K | 528.33 | Joback Method |
| cpg | 320.24 | J/mol×K | 569.14 | Joback Method |
| cpg | 336.94 | J/mol×K | 609.96 | Joback Method |
| cpg | 352.38 | J/mol×K | 650.77 | Joback Method |
| cpg | 366.63 | J/mol×K | 691.59 | Joback Method |
| cpg | 379.73 | J/mol×K | 732.40 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 391.73 | J/mol×K | 773.22 | Joback Method |
| dvisc | 0.0049478 | Pa×s | 289.40 | Joback Method |
| dvisc | 0.0022707 | Pa×s | 329.22 | Joback Method |
| dvisc | 0.0012328 | Pa×s | 369.04 | Joback Method |
| dvisc | 0.0007539 | Pa×s | 408.86 | Joback Method |
| dvisc | 0.0005031 | Pa×s | 448.69 | Joback Method |
| dvisc | 0.0003586 | Pa×s | 488.51 | Joback Method |
| dvisc | 0.0002690 | Pa×s | 528.33 | Joback Method |

# Sources

**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
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C772009&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# 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
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**vc:** Critical Volume

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