# cis-cyclohexane-1,2-dicarboxylic anhydride

**Other names:** cis-1,2-Cyclohexanedicarboxylic anhydride
**Inchi:** InChI=1S/C8H10O3/c9-7-5-3-1-2-4-6(5)8(10)11-7/h5-6H,1-4H2/t5-,6+
**InchiKey:** MUTGBJKUEZFXGO-OLQVQODUSA-N
**Formula:** C8H10O3
**SMILES:** O=C1OC(=O)C2CCCCC12
**Mol. weight [g/mol]:** 154.16
**CAS:** 13149-00-3

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chs | -3914.80 ± 0.40 | kJ/mol | NIST Webbook |
| gf | -229.62 | kJ/mol | Joback Method |
| hf | -488.73 | kJ/mol | Joback Method |
| hfs | -819.60 ± 2.30 | kJ/mol | NIST Webbook |
| hfus | 13.44 | kJ/mol | Joback Method |
| hvap | 46.75 | kJ/mol | Joback Method |
| log10ws | -1.12 | | Crippen Method |
| logp | 0.876 | | Crippen Method |
| mcvol | 110.870 | ml/mol | McGowan Method |
| pc | 3955.54 | kPa | Joback Method |
| ss | 202.40 | J/mol×K | NIST Webbook |
| tb | 571.32 | K | Joback Method |
| tc | 824.11 | K | Joback Method |
| tf | 368.25 | K | Joback Method |
| vc | 0.408 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 353.51 | J/mol×K | 739.85 | Joback Method |
| cpg | 366.32 | J/mol×K | 781.98 | Joback Method |
| cpg | 291.71 | J/mol×K | 571.32 | Joback Method |
| cpg | 308.71 | J/mol×K | 613.45 | Joback Method |
| cpg | 324.69 | J/mol×K | 655.58 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 339.63 | J/mol×K | 697.72 | Joback Method |
| cpg | 378.03 | J/mol×K | 824.11 | Joback Method |
| cps | 207.40 | J/mol×K | 298.15 | NIST Webbook |
| hfust | 0.85 | kJ/mol | 310.50 | NIST Webbook |
| hsubt | 48.80 ± 0.10 | kJ/mol | 325.00 | NIST Webbook |
| hvapt | 48.80 ± 0.10 | kJ/mol | 425.00 | NIST Webbook |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C13149003&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

**chs:** Standard solid enthalpy of combustion
**cpg:** Ideal gas heat capacity
**cps:** Solid phase heat capacity
**gf:** Standard Gibbs free energy of formation
**hf:** Enthalpy of formation at standard conditions
**hfs:** Solid phase enthalpy of formation at standard conditions
**hfus:** Enthalpy of fusion at standard conditions
**hfust:** Enthalpy of fusion at a given temperature
**hsubt:** Enthalpy of sublimation at a given temperature
**hvap:** Enthalpy of vaporization at standard conditions
**hvapt:** Enthalpy of vaporization at a given temperature
**log10ws:** Log10 of Water solubility in mol/l
**logp:** Octanol/Water partition coefficient
**mcvol:** McGowan's characteristic volume
**pc:** Critical Pressure
**ss:** Solid phase molar entropy at standard conditions
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**vc:** Critical Volume