# trans-2-Phenyl-1-cyclopropanecarboxylic acid

**Other names:** trans-2-Phenylcyclopropanecarboxylic acid
Cyclopropanecarboxylic acid, 2-phenyl-, trans-
2-Phenylcyclopropanecarboxylic acid, trans
**Inchi:** InChI=1S/C10H10O2/c11-10(12)9-6-8(9)7-4-2-1-3-5-7/h1-5,8-9H,6H2,(H,11,12)/t8-,9+/m
**InchiKey:** AHDDRJBFJBDEPW-BDAKNGLRSA-N
**Formula:** C10H10O2
**SMILES:** O=C(O)C1CC1c1ccccc1
**Mol. weight [g/mol]:** 162.19
**CAS:** 939-90-2

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| chs | -5032.10 ± 1.20 | kJ/mol | NIST Webbook |
| gf | -66.97 | kJ/mol | Joback Method |
| hf | -225.55 | kJ/mol | Joback Method |
| hfs | -332.00 ± 1.00 | kJ/mol | NIST Webbook |
| hfus | 20.59 | kJ/mol | Joback Method |
| hvap | 63.16 | kJ/mol | Joback Method |
| log10ws | -1.83 | | Crippen Method |
| logp | 1.875 | | Crippen Method |
| mcvol | 124.580 | ml/mol | McGowan Method |
| pc | 3930.78 | kPa | Joback Method |
| tb | 603.00 | K | Joback Method |
| tc | 817.06 | K | Joback Method |
| tf | 353.33 | K | Joback Method |
| vc | 0.469 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 314.75 | J/mol×K | 603.00 | Joback Method |
| cpg | 326.83 | J/mol×K | 638.68 | Joback Method |
| cpg | 338.07 | J/mol×K | 674.35 | Joback Method |
| cpg | 348.51 | J/mol×K | 710.03 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 358.20 | J/mol×K | 745.71 | Joback Method |
| cpg | 367.22 | J/mol×K | 781.38 | Joback Method |
| cpg | 375.60 | J/mol×K | 817.06 | Joback Method |
| dvisc | 0.0046379 | Pa×s | 353.33 | Joback Method |
| dvisc | 0.0022088 | Pa×s | 394.94 | Joback Method |
| dvisc | 0.0012117 | Pa×s | 436.55 | Joback Method |
| dvisc | 0.0007380 | Pa×s | 478.17 | Joback Method |
| dvisc | 0.0004866 | Pa×s | 519.78 | Joback Method |
| dvisc | 0.0003413 | Pa×s | 561.39 | Joback Method |
| dvisc | 0.0002513 | Pa×s | 603.00 | Joback Method |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C939902&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
**dvisc:** Dynamic viscosity
**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
**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