# 3-(2-Propenyl)cyclopentene

**Other names:** Cyclopentene,3-(2-propenyl)-
3-[2-Propenyl]-1-cyclopentene
3-Allyl-1-cyclopentene
3-Allylcyclopentene-1
**Inchi:** InChI=1S/C8H12/c1-2-5-8-6-3-4-7-8/h2-3,6,8H,1,4-5,7H2
**InchiKey:** VWGHETFSGHHDRB-UHFFFAOYSA-N
**Formula:** C8H12
**SMILES:** C=CCC1C=CCC1
**Mol. weight [g/mol]:** 108.18
**CAS:** 14564-97-7

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 170.83 | kJ/mol | Joback Method |
| hf | 35.24 | kJ/mol | Joback Method |
| hfus | 10.35 | kJ/mol | Joback Method |
| hvap | 33.28 | kJ/mol | Joback Method |
| ie | 8.89 ± 0.02 | eV | NIST Webbook |
| log10ws | -2.53 | | Crippen Method |
| logp | 2.529 | | Crippen Method |
| mcvol | 104.120 | ml/mol | McGowan Method |
| pc | 3348.98 | kPa | Joback Method |
| rinpol | 805.00 | | NIST Webbook |
| rinpol | 802.00 | | NIST Webbook |
| rinpol | 800.00 | | NIST Webbook |
| rinpol | 797.00 | | NIST Webbook |
| rinpol | 805.00 | | NIST Webbook |
| rinpol | 801.20 | | NIST Webbook |
| rinpol | 800.00 | | NIST Webbook |
| rinpol | 797.00 | | NIST Webbook |
| ripol | 940.90 | | NIST Webbook |
| ripol | 934.80 | | NIST Webbook |
| ripol | 926.60 | | NIST Webbook |
| ripol | 985.00 | | NIST Webbook |
| ripol | 989.00 | | NIST Webbook |
| ripol | 992.00 | | NIST Webbook |
| ripol | 970.00 | | NIST Webbook |

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|---|---|---|---|
| ripol | 978.00 | | NIST Webbook |
| ripol | 985.00 | | NIST Webbook |
| ripol | 940.90 | | NIST Webbook |
| ripol | 926.60 | | NIST Webbook |
| ripol | 934.80 | | NIST Webbook |
| tb | 393.56 | K | Joback Method |
| tc | 592.64 | K | Joback Method |
| tf | 189.82 | K | Joback Method |
| vc | 0.392 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 186.26 | J/mol×K | 393.56 | Joback Method |
| cpg | 251.98 | J/mol×K | 559.46 | Joback Method |
| cpg | 240.31 | J/mol×K | 526.28 | Joback Method |
| cpg | 227.93 | J/mol×K | 493.10 | Joback Method |
| cpg | 214.82 | J/mol×K | 459.92 | Joback Method |
| cpg | 200.94 | J/mol×K | 426.74 | Joback Method |
| cpg | 262.98 | J/mol×K | 592.64 | Joback Method |
| dvisc | 0.0002803 | Pa×s | 393.56 | Joback Method |
| dvisc | 0.0003407 | Pa×s | 359.60 | Joback Method |
| dvisc | 0.0004314 | Pa×s | 325.65 | Joback Method |
| dvisc | 0.0005771 | Pa×s | 291.69 | Joback Method |
| dvisc | 0.0008334 | Pa×s | 257.73 | Joback Method |
| dvisc | 0.0013456 | Pa×s | 223.78 | Joback Method |
| dvisc | 0.0025787 | Pa×s | 189.82 | Joback Method |

# 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=C14564977&Units=SI

**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws

# 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 |
| **ie:** | Ionization energy |
| **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 |
| **ripol:** | Polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |