# 1-Methylcyclooctene

**Other names:** Cyclooctene, 1-methyl
**Inchi:** InChI=1S/C9H16/c1-9-7-5-3-2-4-6-8-9/h7H,2-6,8H2,1H3/b9-7-
**InchiKey:** WFLPGXDWMZEHGP-CLFYSBASSA-N
**Formula:** C9H16
**SMILES:** CC1=CCCCCCC1
**Mol. weight [g/mol]:** 124.22
**CAS:** 933-11-9

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 53.19 | kJ/mol | Joback Method |
| hf | -120.44 | kJ/mol | Joback Method |
| hfus | 6.46 | kJ/mol | Joback Method |
| hvap | 37.66 | kJ/mol | Joback Method |
| log10ws | -3.34 | | Crippen Method |
| logp | 3.287 | | Crippen Method |
| mcvol | 122.510 | ml/mol | McGowan Method |
| pc | 3181.14 | kPa | Joback Method |
| rinpol | 983.00 | | NIST Webbook |
| rinpol | 969.00 | | NIST Webbook |
| rinpol | 978.00 | | NIST Webbook |
| rinpol | 983.00 | | NIST Webbook |
| rinpol | 978.00 | | NIST Webbook |
| rinpol | 1023.00 | | NIST Webbook |
| rinpol | 969.00 | | NIST Webbook |
| rinpol | 978.00 | | NIST Webbook |
| rinpol | 969.00 | | NIST Webbook |
| rinpol | 978.00 | | NIST Webbook |
| rinpol | 969.00 | | NIST Webbook |
| tb | 442.22 | K | Joback Method |
| tc | 662.12 | K | Joback Method |
| tf | 209.05 | K | Joback Method |
| vc | 0.444 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 241.52 | J/mol×K | 442.22 | Joback Method |
| cpg | 260.24 | J/mol×K | 478.87 | Joback Method |
| cpg | 278.01 | J/mol×K | 515.52 | Joback Method |
| cpg | 294.85 | J/mol×K | 552.17 | Joback Method |
| cpg | 310.77 | J/mol×K | 588.82 | Joback Method |
| cpg | 325.80 | J/mol×K | 625.47 | Joback Method |
| cpg | 339.93 | J/mol×K | 662.12 | Joback Method |
| dvisc | 0.0179390 | Pa×s | 209.05 | Joback Method |
| dvisc | 0.0046185 | Pa×s | 247.91 | Joback Method |
| dvisc | 0.0017176 | Pa×s | 286.77 | Joback Method |
| dvisc | 0.0008089 | Pa×s | 325.63 | Joback Method |
| dvisc | 0.0004473 | Pa×s | 364.50 | Joback Method |
| dvisc | 0.0002772 | Pa×s | 403.36 | Joback Method |
| dvisc | 0.0001869 | Pa×s | 442.22 | Joback Method |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C933119&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

**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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |