# Dichloromethyl radical

**Inchi:** InChI=1S/CHCl2/c2-1-3/h1H
**InchiKey:** ZJULYDCRWUEPTK-UHFFFAOYSA-N
**Formula:** CHCl2
**SMILES:** Cl[CH]Cl
**Mol. weight [g/mol]:** 83.92
**CAS:** 3474-12-2

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| ea | 1.30 ± 0.20 | eV | NIST Webbook |
| ea | 1.57 ± 0.14 | eV | NIST Webbook |
| ea | 1.52 ± 0.11 | eV | NIST Webbook |
| ea | 1.47 ± 0.04 | eV | NIST Webbook |
| gf | -16.38 | kJ/mol | Joback Method |
| hf | -44.92 | kJ/mol | Joback Method |
| hfus | 4.90 | kJ/mol | Joback Method |
| hvap | 26.05 | kJ/mol | Joback Method |
| ie | 8.45 | eV | NIST Webbook |
| ie | 9.30 | eV | NIST Webbook |
| ie | 9.54 ± 0.10 | eV | NIST Webbook |
| ie | 8.54 ± 0.01 | eV | NIST Webbook |
| ie | 8.32 ± 0.01 | eV | NIST Webbook |
| log10ws | -1.15 | | Crippen Method |
| logp | 1.583 | | Crippen Method |
| mcvol | 47.280 | ml/mol | McGowan Method |
| pc | 5602.57 | kPa | Joback Method |
| tb | 296.00 | K | Joback Method |
| tc | 478.43 | K | Joback Method |
| tf | 162.24 | K | Joback Method |
| vc | 0.174 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|

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|---|---|---|---|---|
| cpg | 49.79 | J/mol×K | 296.00 | Joback Method |
| cpg | 52.30 | J/mol×K | 326.40 | Joback Method |
| cpg | 54.53 | J/mol×K | 356.81 | Joback Method |
| cpg | 56.48 | J/mol×K | 387.21 | Joback Method |
| cpg | 58.18 | J/mol×K | 417.62 | Joback Method |
| cpg | 59.66 | J/mol×K | 448.02 | Joback Method |
| cpg | 60.93 | J/mol×K | 478.43 | Joback Method |
| dvisc | 0.0007668 | Pa×s | 162.24 | Joback Method |
| dvisc | 0.0005993 | Pa×s | 184.53 | Joback Method |
| dvisc | 0.0004940 | Pa×s | 206.83 | Joback Method |
| dvisc | 0.0004228 | Pa×s | 229.12 | Joback Method |
| dvisc | 0.0003719 | Pa×s | 251.41 | Joback Method |
| dvisc | 0.0003341 | Pa×s | 273.71 | Joback Method |
| dvisc | 0.0003050 | Pa×s | 296.00 | Joback Method |

# Sources

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|---|---|
| **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=C3474122&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 |
| **ea:** | Electron affinity |
| **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 |
| **tb:** | Normal Boiling Point Temperature |

| | |
|---|---|
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |