# Acetic acid, 10-chlorodecyl ester

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|---|---|
| **Other names:** | 1-Decanol, 10-chloro, acetate |
| | 10-Chlorodecyl acetate |
| | 10-Chloro-1-decanol, acetate |
| **Inchi:** | InChI=1S/C12H23ClO2/c1-12(14)15-11-9-7-5-3-2-4-6-8-10-13/h2-11H2,1H3 |
| **InchiKey:** | JFOKWOUOZKLRKE-UHFFFAOYSA-N |
| **Formula:** | C12H23ClO2 |
| **SMILES:** | CC(=O)OCCCCCCCCCCCl |
| **Mol. weight [g/mol]:** | 234.76 |
| **CAS:** | 51309-11-6 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -195.69 | kJ/mol | Joback Method |
| hf | -551.55 | kJ/mol | Joback Method |
| hfus | 33.82 | kJ/mol | Joback Method |
| hvap | 55.85 | kJ/mol | Joback Method |
| log10ws | -3.86 | | Crippen Method |
| logp | 3.909 | | Crippen Method |
| mcvol | 199.620 | ml/mol | McGowan Method |
| pc | 1793.94 | kPa | Joback Method |
| rinpol | 1696.40 | | NIST Webbook |
| rinpol | 1701.00 | | NIST Webbook |
| rinpol | 1664.00 | | NIST Webbook |
| rinpol | 1661.00 | | NIST Webbook |
| rinpol | 1701.00 | | NIST Webbook |
| rinpol | 1658.00 | | NIST Webbook |
| rinpol | 1651.00 | | NIST Webbook |
| rinpol | 1696.40 | | NIST Webbook |
| ripol | 2210.00 | | NIST Webbook |
| ripol | 2185.00 | | NIST Webbook |
| ripol | 2215.00 | | NIST Webbook |
| ripol | 2193.00 | | NIST Webbook |
| ripol | 2185.00 | | NIST Webbook |
| tb | 587.68 | K | Joback Method |
| tc | 762.26 | K | Joback Method |
| tf | 327.08 | K | Joback Method |
| vc | 0.780 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 496.42 | J/mol×K | 587.68 | Joback Method |
| cpg | 565.36 | J/mol×K | 733.17 | Joback Method |
| cpg | 552.80 | J/mol×K | 704.07 | Joback Method |
| cpg | 539.64 | J/mol×K | 674.97 | Joback Method |
| cpg | 525.87 | J/mol×K | 645.87 | Joback Method |
| cpg | 511.47 | J/mol×K | 616.78 | Joback Method |
| cpg | 577.32 | J/mol×K | 762.26 | Joback Method |
| dvisc | 0.0001781 | Pa×s | 587.68 | Joback Method |
| dvisc | 0.0002330 | Pa×s | 544.25 | Joback Method |
| dvisc | 0.0003194 | Pa×s | 500.81 | Joback Method |
| dvisc | 0.0004650 | Pa×s | 457.38 | Joback Method |
| dvisc | 0.0007323 | Pa×s | 413.95 | Joback Method |
| dvisc | 0.0012830 | Pa×s | 370.51 | Joback Method |
| dvisc | 0.0026085 | Pa×s | 327.08 | Joback Method |

# Sources

**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C51309116&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

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|---|---|
| **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 |