# m-Chlorophenylacetic acid

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|---|---|
| **Other names:** | (3-chlorophenyl)ethanoic acid |
| | 3-Chlorobenzeneacetic acid |
| | 3-Chlorophenylacetic acid |
| | 3-chlorobenzeneethanoic acid |
| | Acetic acid, (m-chlorophenyl)- |
| | Benzeneacetic acid, 3-chloro- |
| | Meta-chlorophenyl acetic acid |
| **Inchi:** | InChI=1S/C8H7ClO2/c9-7-3-1-2-6(4-7)5-8(10)11/h1-4H,5H2,(H,10,11) |
| **InchiKey:** | WFPMUFXQDKMVCO-UHFFFAOYSA-N |
| **Formula:** | C8H7ClO2 |
| **SMILES:** | O=C(O)Cc1cccc(Cl)c1 |
| **Mol. weight [g/mol]:** | 170.59 |
| **CAS:** | 1878-65-5 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -158.41 | kJ/mol | Joback Method |
| hf | -263.94 | kJ/mol | Joback Method |
| hfus | 22.60 | kJ/mol | Thermochemistry of phenylacetic and monochlorophenylacetic acids |
| hvap | 64.15 | kJ/mol | Joback Method |
| log10ws | -2.06 | | Crippen Method |
| logp | 1.967 | | Crippen Method |
| mcvol | 119.500 | ml/mol | McGowan Method |
| pc | 4151.61 | kPa | Joback Method |
| tb | 597.58 | K | Joback Method |
| tc | 809.04 | K | Joback Method |
| tf | 359.53 | K | Joback Method |
| vc | 0.450 | m3/kmol | Joback Method |

# Temperature Dependent Properties

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

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|---|---|---|---|---|
| cpg | 257.49 | J/mol×K | 597.58 | Joback Method |
| cpg | 266.08 | J/mol×K | 632.82 | Joback Method |
| cpg | 274.10 | J/mol×K | 668.07 | Joback Method |
| cpg | 281.58 | J/mol×K | 703.31 | Joback Method |
| cpg | 288.55 | J/mol×K | 738.55 | Joback Method |
| cpg | 295.02 | J/mol×K | 773.80 | Joback Method |
| cpg | 301.02 | J/mol×K | 809.04 | Joback Method |
| dvisc | 0.0036481 | Pa×s | 359.53 | Joback Method |
| dvisc | 0.0015134 | Pa×s | 399.21 | Joback Method |
| dvisc | 0.0007361 | Pa×s | 438.88 | Joback Method |
| dvisc | 0.0004034 | Pa×s | 478.55 | Joback Method |
| dvisc | 0.0002425 | Pa×s | 518.23 | Joback Method |
| dvisc | 0.0001567 | Pa×s | 557.90 | Joback Method |
| dvisc | 0.0001073 | Pa×s | 597.58 | Joback Method |
| hfust | 22.60 | kJ/mol | 349.80 | NIST Webbook |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C1878655&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |
| **Thermochemistry of phenylacetic and monochlorophenylacetic acids:** | https://www.doi.org/10.1016/j.jct.2007.07.010 |
| **Joback Method:** | https://en.wikipedia.org/wiki/Joback_method |

# 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 |
| **hfust:** | Enthalpy of fusion at a given temperature |
| **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 |

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