# Methyl 4,8-decadienoate

**Other names:** 4,8-Decadienoic acid, methyl ester
**Inchi:** InChI=1S/C11H18O2/c1-3-4-5-6-7-8-9-10-11(12)13-2/h3-4,7-8H,5-6,9-10H2,1-2H3/b4-3+
**InchiKey:** ZYNYTTXGMNCKDP-DYWGDJMRSA-N
**Formula:** C11H18O2
**SMILES:** CC=CCCC=CCCC(=O)OC
**Mol. weight [g/mol]:** 182.26

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -31.74 | kJ/mol | Joback Method |
| hf | -280.73 | kJ/mol | Joback Method |
| hfus | 27.44 | kJ/mol | Joback Method |
| hvap | 49.15 | kJ/mol | Joback Method |
| log10ws | -3.00 | | Crippen Method |
| logp | 2.852 | | Crippen Method |
| mcvol | 164.690 | ml/mol | McGowan Method |
| pc | 2216.62 | kPa | Joback Method |
| rinpol | 1316.00 | | NIST Webbook |
| rinpol | 1293.00 | | NIST Webbook |
| ripol | 1685.00 | | NIST Webbook |
| tb | 535.69 | K | Joback Method |
| tc | 721.31 | K | Joback Method |
| tf | 275.73 | K | Joback Method |
| vc | 0.635 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 379.20 | J/mol×K | 535.69 | Joback Method |
| cpg | 393.43 | J/mol×K | 566.63 | Joback Method |
| cpg | 406.97 | J/mol×K | 597.56 | Joback Method |
| cpg | 419.86 | J/mol×K | 628.50 | Joback Method |
| cpg | 432.12 | J/mol×K | 659.44 | Joback Method |
| cpg | 443.78 | J/mol×K | 690.38 | Joback Method |

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|---|---|---|---|---|
| cpg | 454.86 | J/mol×K | 721.31 | Joback Method |
| dvisc | 0.0027700 | Pa×s | 275.73 | Joback Method |
| dvisc | 0.0012188 | Pa×s | 319.06 | Joback Method |
| dvisc | 0.0006526 | Pa×s | 362.38 | Joback Method |
| dvisc | 0.0003993 | Pa×s | 405.71 | Joback Method |
| dvisc | 0.0002686 | Pa×s | 449.04 | Joback Method |
| dvisc | 0.0001938 | Pa×s | 492.36 | Joback Method |
| dvisc | 0.0001473 | Pa×s | 535.69 | Joback Method |

# Sources

**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
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=R210189&Units=SI

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