# Dodecanoic acid, 2-(acetyloxy)-1-[(acetyloxy)methyl]ethyl ester

**Other names:** 2-(Acetyloxy)-1-[(acetyloxy)methyl]ethyl dodecanoate
Ethyl dodecanoic acid, 2-(acetyloxy)-1-((acetyloxy)methyl)
**Inchi:** InChI=1S/C19H34O6/c1-4-5-6-7-8-9-10-11-12-13-19(22)25-18(14-23-16(2)20)15-24-17(3
**InchiKey:** IADBTKCAYVABOP-UHFFFAOYSA-N
**Formula:** C19H34O6
**SMILES:** CCCCCCCCCCCC(=O)OC(COC(C)=O)COC(C)=O
**Mol. weight [g/mol]:** 358.47
**CAS:** 55191-43-0

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -595.10 | kJ/mol | Joback Method |
| hf | -1175.17 | kJ/mol | Joback Method |
| hfus | 49.80 | kJ/mol | Joback Method |
| hvap | 84.97 | kJ/mol | Joback Method |
| log10ws | -4.48 | | Crippen Method |
| logp | 3.945 | | Crippen Method |
| mcvol | 300.890 | ml/mol | McGowan Method |
| pc | 1192.35 | kPa | Joback Method |
| tb | 862.55 | K | Joback Method |
| tc | 1057.38 | K | Joback Method |
| tf | 505.37 | K | Joback Method |
| vc | 1.165 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 962.35 | J/mol×K | 862.55 | Joback Method |
| cpg | 978.50 | J/mol×K | 895.02 | Joback Method |
| cpg | 993.48 | J/mol×K | 927.49 | Joback Method |
| cpg | 1007.27 | J/mol×K | 959.96 | Joback Method |
| cpg | 1019.88 | J/mol×K | 992.44 | Joback Method |
| cpg | 1031.32 | J/mol×K | 1024.91 | Joback Method |
| cpg | 1041.60 | J/mol×K | 1057.38 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0005695 | Pa×s | 505.37 | Joback Method |
| dvisc | 0.0002897 | Pa×s | 564.90 | Joback Method |
| dvisc | 0.0001676 | Pa×s | 624.43 | Joback Method |
| dvisc | 0.0001067 | Pa×s | 683.96 | Joback Method |
| dvisc | 0.0000730 | Pa×s | 743.49 | Joback Method |
| dvisc | 0.0000528 | Pa×s | 803.02 | Joback Method |
| dvisc | 0.0000400 | Pa×s | 862.55 | Joback Method |

# Sources

| | |
|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=C55191430&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

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