# Nonadecanoic acid, ethyl ester

**Other names:** ethyl nonadecanoate
**Inchi:** InChI=1S/C21H42O2/c1-3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21(22)23-4-2/h3
**InchiKey:** ICVYQLQYVCXJNE-UHFFFAOYSA-N
**Formula:** C21H42O2
**SMILES:** CCCCCCCCCCCCCCCCCCC(=O)OCC
**Mol. weight [g/mol]:** 326.56
**CAS:** 18281-04-4

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -107.98 | kJ/mol | Joback Method |
| hf | -721.57 | kJ/mol | Joback Method |
| hfus | 52.93 | kJ/mol | Joback Method |
| hvap | 71.50 | kJ/mol | Joback Method |
| log10ws | -7.48 | | Crippen Method |
| logp | 7.201 | | Crippen Method |
| mcvol | 314.190 | ml/mol | McGowan Method |
| pc | 983.93 | kPa | Joback Method |
| rinpol | 2274.00 | | NIST Webbook |
| rinpol | 2277.00 | | NIST Webbook |
| rinpol | 2282.00 | | NIST Webbook |
| rinpol | 2278.00 | | NIST Webbook |
| rinpol | 2277.00 | | NIST Webbook |
| rinpol | 2274.00 | | NIST Webbook |
| ripol | 2553.00 | | NIST Webbook |
| ripol | 2559.00 | | NIST Webbook |
| ripol | 2563.00 | | NIST Webbook |
| ripol | 2565.00 | | NIST Webbook |
| ripol | 2547.00 | | NIST Webbook |
| ripol | 2547.00 | | NIST Webbook |
| tb | 756.17 | K | Joback Method |
| tc | 929.77 | K | Joback Method |
| tf | 398.59 | K | Joback Method |
| vc | 1.236 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1044.06 | J/mol×K | 871.90 | Joback Method |
| cpg | 1075.99 | J/mol×K | 929.77 | Joback Method |
| cpg | 1060.46 | J/mol×K | 900.83 | Joback Method |
| cpg | 969.32 | J/mol×K | 756.17 | Joback Method |
| cpg | 989.43 | J/mol×K | 785.10 | Joback Method |
| cpg | 1008.57 | J/mol×K | 814.04 | Joback Method |
| cpg | 1026.77 | J/mol×K | 842.97 | Joback Method |
| dvisc | 0.0000640 | Pa×s | 756.17 | Joback Method |
| dvisc | 0.0001235 | Pa×s | 636.98 | Joback Method |
| dvisc | 0.0000864 | Pa×s | 696.57 | Joback Method |
| dvisc | 0.0014949 | Pa×s | 398.59 | Joback Method |
| dvisc | 0.0006283 | Pa×s | 458.19 | Joback Method |
| dvisc | 0.0003224 | Pa×s | 517.78 | Joback Method |
| dvisc | 0.0001899 | Pa×s | 577.38 | Joback Method |
| hfust | 43.10 | kJ/mol | 309.00 | NIST Webbook |
| hsubt | 149.70 | kJ/mol | 305.00 | NIST Webbook |
| hvapt | 111.00 | kJ/mol | 320.00 | NIST Webbook |

# Sources

**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=C18281044&Units=SI
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l

# 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 |
| **hsubt:** | Enthalpy of sublimation at a given temperature |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **hvapt:** | Enthalpy of vaporization at a given temperature |
| **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 |