# Oleic acid, eicosyl ester

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|---|---|
| **Other names:** | 9-Octadecenoic acid (Z)-, eicosyl ester |
| | icosyl oleate |
| | Octadec-9-enoic acid icosyl ester, Z |
| **Inchi:** | InChI=1S/C38H74O2/c1-3-5-7-9-11-13-15-17-19-20-21-23-25-27-29-31-33-35-37-40-38( |
| **InchiKey:** | HKJBUPVMFYBSHI-PYCFMQQDSA-N |
| **Formula:** | C38H74O2 |
| **SMILES:** | CCCCCCCCC=CCCCCCCCC(=O)OCCCCCCCCCCCCCCCCCCCC |
| **Mol. weight [g/mol]:** | 562.99 |
| **CAS:** | 22393-88-0 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 115.38 | kJ/mol | Joback Method |
| hf | -955.23 | kJ/mol | Joback Method |
| hfus | 97.17 | kJ/mol | Joback Method |
| hvap | 109.30 | kJ/mol | Joback Method |
| log10ws | -14.45 | | Crippen Method |
| logp | 13.609 | | Crippen Method |
| mcvol | 549.420 | ml/mol | McGowan Method |
| pc | 439.87 | kPa | Joback Method |
| rinpol | 3922.10 | | NIST Webbook |
| tb | 1149.29 | K | Joback Method |
| tc | 1523.64 | K | Joback Method |
| tf | 585.10 | K | Joback Method |
| vc | 2.167 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 2064.62 | J/mol×K | 1149.29 | Joback Method |
| cpg | 2102.17 | J/mol×K | 1211.68 | Joback Method |
| cpg | 2136.19 | J/mol×K | 1274.07 | Joback Method |
| cpg | 2167.30 | J/mol×K | 1336.46 | Joback Method |
| cpg | 2196.10 | J/mol×K | 1398.86 | Joback Method |

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|---|---|---|---|---|
| cpg | 2223.22 | J/mol×K | 1461.25 | Joback Method |
| cpg | 2249.29 | J/mol×K | 1523.64 | Joback Method |
| dvisc | 0.0001421 | Pa×s | 585.10 | Joback Method |
| dvisc | 0.0000522 | Pa×s | 679.13 | Joback Method |
| dvisc | 0.0000245 | Pa×s | 773.16 | Joback Method |
| dvisc | 0.0000135 | Pa×s | 867.19 | Joback Method |
| dvisc | 0.0000084 | Pa×s | 961.23 | Joback Method |
| dvisc | 0.0000057 | Pa×s | 1055.26 | Joback Method |
| dvisc | 0.0000041 | Pa×s | 1149.29 | 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=C22393880&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
**tb:** Normal Boiling Point Temperature
**tc:** Critical Temperature
**tf:** Normal melting (fusion) point
**vc:** Critical Volume