# 9-Octadecenoic acid (Z)-, tetradecyl ester

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|---|---|
| **Other names:** | Oleic acid, tetradecyl ester |
| | Octadec-9-enoic acid tetradecyl ester, Z |
| | tetradecyl oleate |
| **Inchi:** | InChI=1S/C32H62O2/c1-3-5-7-9-11-13-15-17-18-19-20-22-24-26-28-30-32(33)34-31-29- |
| **InchiKey:** | DHZWALZKPWZSMA-ZCXUNETKSA-N |
| **Formula:** | C32H62O2 |
| **SMILES:** | CCCCCCCCC=CCCCCCCCC(=O)OCCCCCCCCCCCCCCC |
| **Mol. weight [g/mol]:** | 478.83 |
| **CAS:** | 22393-85-7 |

# Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 64.86 | kJ/mol | Joback Method |
| hf | -831.39 | kJ/mol | Joback Method |
| hfus | 81.62 | kJ/mol | Joback Method |
| hvap | 95.94 | kJ/mol | Joback Method |
| log10ws | -11.93 | | Crippen Method |
| logp | 11.268 | | Crippen Method |
| mcvol | 464.880 | ml/mol | McGowan Method |
| pc | 569.06 | kPa | Joback Method |
| rinpol | 3321.09 | | NIST Webbook |
| rinpol | 3321.09 | | NIST Webbook |
| tb | 1012.01 | K | Joback Method |
| tc | 1267.95 | K | Joback Method |
| tf | 517.48 | K | Joback Method |
| vc | 1.831 | m3/kmol | Joback Method |

# Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1655.38 | J/mol×K | 1012.01 | Joback Method |
| cpg | 1683.12 | J/mol×K | 1054.67 | Joback Method |
| cpg | 1708.85 | J/mol×K | 1097.32 | Joback Method |
| cpg | 1732.74 | J/mol×K | 1139.98 | Joback Method |

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|---|---|---|---|---|
| cpg | 1754.93 | J/mol×K | 1182.64 | Joback Method |
| cpg | 1775.61 | J/mol×K | 1225.29 | Joback Method |
| cpg | 1794.92 | J/mol×K | 1267.95 | Joback Method |
| dvisc | 0.0003446 | Pa×s | 517.48 | Joback Method |
| dvisc | 0.0001301 | Pa×s | 599.90 | Joback Method |
| dvisc | 0.0000622 | Pa×s | 682.32 | Joback Method |
| dvisc | 0.0000348 | Pa×s | 764.74 | Joback Method |
| dvisc | 0.0000218 | Pa×s | 847.17 | Joback Method |
| dvisc | 0.0000149 | Pa×s | 929.59 | Joback Method |
| dvisc | 0.0000108 | Pa×s | 1012.01 | Joback Method |

# Sources

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|---|---|
| **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=C22393857&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# 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 |
| **rinpol:** | Non-polar retention indices |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |