# Fumaric acid, decyl pent-4-en-2-yl ester

**Inchi:** InChI=1S/C19H32O4/c1-4-6-7-8-9-10-11-12-16-22-18(20)14-15-19(21)23-17(3)13-5-2/h5
**InchiKey:** GBLKVHIAAKBKTQ-CCEZHUSRSA-N
**Formula:** C19H32O4
**SMILES:** C=CCC(C)OC(=O)C=CC(=O)OCCCCCCCCCC
**Mol. weight [g/mol]:** 324.45

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -193.12 | kJ/mol | Joback Method |
| hf | -687.72 | kJ/mol | Joback Method |
| hfus | 45.94 | kJ/mol | Joback Method |
| hvap | 75.10 | kJ/mol | Joback Method |
| log10ws | -5.32 | | Crippen Method |
| logp | 4.734 | | Crippen Method |
| mcvol | 284.850 | ml/mol | McGowan Method |
| pc | 1232.88 | kPa | Joback Method |
| rinpol | 2191.00 | | NIST Webbook |
| rinpol | 2191.00 | | NIST Webbook |
| tb | 787.10 | K | Joback Method |
| tc | 973.13 | K | Joback Method |
| tf | 426.37 | K | Joback Method |
| vc | 1.103 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 858.20 | J/mol×K | 787.10 | Joback Method |
| cpg | 875.08 | J/mol×K | 818.11 | Joback Method |
| cpg | 891.01 | J/mol×K | 849.11 | Joback Method |
| cpg | 906.03 | J/mol×K | 880.12 | Joback Method |
| cpg | 920.17 | J/mol×K | 911.12 | Joback Method |
| cpg | 933.45 | J/mol×K | 942.13 | Joback Method |
| cpg | 945.90 | J/mol×K | 973.13 | Joback Method |
| dvisc | 0.0010425 | Pa×s | 426.37 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0004651 | Pa×s | 486.49 | Joback Method |
| dvisc | 0.0002478 | Pa×s | 546.61 | Joback Method |
| dvisc | 0.0001496 | Pa×s | 606.73 | Joback Method |
| dvisc | 0.0000989 | Pa×s | 666.86 | Joback Method |
| dvisc | 0.0000700 | Pa×s | 726.98 | Joback Method |
| dvisc | 0.0000522 | Pa×s | 787.10 | Joback Method |

# Sources

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|---|---|
| **McGowan Method:** | http://link.springer.com/article/10.1007/BF02311772 |
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U348929&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 |

# 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 |