# Eicosyl ethyl ether

**Inchi:** InChI=1S/C22H46O/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:** PRGOMPHKWHPFFI-UHFFFAOYSA-N
**Formula:** C22H46O
**SMILES:** CCCCCCCCCCCCCCCCCCCCCOCC
**Mol. weight [g/mol]:** 326.60

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | 29.36 | kJ/mol | Joback Method |
| hf | -629.63 | kJ/mol | Joback Method |
| hfus | 53.92 | kJ/mol | Joback Method |
| hvap | 66.98 | kJ/mol | Joback Method |
| log10ws | -8.12 | | Crippen Method |
| logp | 8.065 | | Crippen Method |
| mcvol | 326.710 | ml/mol | McGowan Method |
| pc | 892.67 | kPa | Joback Method |
| rinpol | 2292.00 | | NIST Webbook |
| rinpol | 2292.00 | | NIST Webbook |
| tb | 725.18 | K | Joback Method |
| tc | 891.69 | K | Joback Method |
| tf | 359.93 | K | Joback Method |
| vc | 1.286 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 997.15 | J/mol×K | 725.18 | Joback Method |
| cpg | 1018.84 | J/mol×K | 752.93 | Joback Method |
| cpg | 1039.58 | J/mol×K | 780.68 | Joback Method |
| cpg | 1059.40 | J/mol×K | 808.43 | Joback Method |
| cpg | 1078.30 | J/mol×K | 836.19 | Joback Method |
| cpg | 1096.33 | J/mol×K | 863.94 | Joback Method |
| cpg | 1113.50 | J/mol×K | 891.69 | Joback Method |
| dvisc | 0.0019109 | Pa×s | 359.93 | Joback Method |

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|---|---|---|---|---|
| dvisc | 0.0006985 | Pa×s | 420.80 | Joback Method |
| dvisc | 0.0003293 | Pa×s | 481.68 | Joback Method |
| dvisc | 0.0001837 | Pa×s | 542.55 | Joback Method |
| dvisc | 0.0001153 | Pa×s | 603.43 | Joback Method |
| dvisc | 0.0000789 | Pa×s | 664.30 | Joback Method |
| dvisc | 0.0000575 | Pa×s | 725.18 | Joback Method |

# Sources

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|---|---|
| **NIST Webbook:** | http://webbook.nist.gov/cgi/cbook.cgi?ID=U406366&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

| | |
|---|---|
| **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 |