# 2-[2-[2-[2-[2-[2-[2-[2-[2-(2-Methoxyethoxy)ethoxy]e
# 2,2,3,3,3-pentafluoropropanoate

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|---|---|
| **Other names:** | Decaethylene glycol monomethyl ether, pentafluoropropionate |
| | 3,6,9,12,15,18,21,24,27,30-Decaoxahentriacont-1-yl pentafluoropropionate |
| **Inchi:** | InChI=1S/C24H43F5O12/c1-31-2-3-32-4-5-33-6-7-34-8-9-35-10-11-36-12-13-37-14-15-3 |
| **InchiKey:** | YTMCKLNFXSSINO-UHFFFAOYSA-N |
| **Formula:** | C24H43F5O12 |
| **SMILES:** | COCCOCCOCCOCCOCCOCCOCCOCCOCCOCCOC(=O)C(F)(F)C(F)(F)F |
| **Mol. weight [g/mol]:** | 618.58 |

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| gf | -2101.09 | kJ/mol | Joback Method |
| hf | -3103.74 | kJ/mol | Joback Method |
| hfus | 73.15 | kJ/mol | Joback Method |
| hvap | 95.60 | kJ/mol | Joback Method |
| log10ws | -0.58 | | Crippen Method |
| logp | 1.523 | | Crippen Method |
| mcvol | 424.010 | ml/mol | McGowan Method |
| pc | 680.65 | kPa | Joback Method |
| rinpol | 3004.50 | | NIST Webbook |
| rinpol | 3004.50 | | NIST Webbook |
| tb | 1038.90 | K | Joback Method |
| tc | 1338.30 | K | Joback Method |
| tf | 662.49 | K | Joback Method |
| vc | 1.651 | m3/kmol | Joback Method |

## Temperature Dependent Properties

| Property code | Value | Unit | Temperature [K] | Source |
|---|---|---|---|---|
| cpg | 1503.92 | J/mol×K | 1038.90 | Joback Method |
| cpg | 1519.57 | J/mol×K | 1088.80 | Joback Method |
| cpg | 1530.20 | J/mol×K | 1138.70 | Joback Method |
| cpg | 1535.67 | J/mol×K | 1188.60 | Joback Method |
| cpg | 1535.88 | J/mol×K | 1238.50 | Joback Method |
| cpg | 1530.69 | J/mol×K | 1288.40 | Joback Method |

| | | | | |
|---|---|---|---|---|
| cpg | 1519.99 | J/mol×K | 1338.30 | Joback Method |

# Sources

| | |
|---|---|
| **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=U351976&Units=SI |
| **Crippen Method:** | http://pubs.acs.org/doi/abs/10.1021/ci990307l |
| **Crippen Method:** | https://www.chemeo.com/doc/models/crippen_log10ws |

# Legend

| | |
|---|---|
| **cpg:** | Ideal gas heat capacity |
| **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 |

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