# Methylphosphonic acid, dipropyl ester

**Other names:** Methylphosphonic acid, dipropyl ester
**Inchi:** InChI=1S/C7H17O3P/c1-4-6-9-11(3,8)10-7-5-2/h4-7H2,1-3H3
**InchiKey:** NRMHUSQXOMWJGD-UHFFFAOYSA-N
**Formula:** C7H17O3P
**SMILES:** CCCOP(C)(=O)OCCC
**Mol. weight [g/mol]:** 180.18

## Physical Properties

| Property code | Value | Unit | Source |
|---|---|---|---|
| af | 0.5228 | | Cheméo Relay (1.0) |
| gf | -345.82 | kJ/mol | Cheméo Relay (1.0, beta) |
| hf | -705.53 | kJ/mol | Cheméo Relay (1.0) |
| hvap | 62.50 | kJ/mol | Cheméo Relay (1.0) |
| ie | 9.99 | eV | Cheméo Relay (1.0) |
| log10ws | -0.89 | | Cheméo Relay (1.0) |
| logp | 2.663 | | Crippen Method |
| mcvol | 147.560 | ml/mol | McGowan Method |
| pc | 2440.64 | kPa | Cheméo Relay (1.0, beta) |
| tb | 500.68 | K | Cheméo Relay (1.0) |
| tc | 624.41 | K | Cheméo Relay (1.0) |
| tf | 206.45 | K | Cheméo Relay (1.0) |
| vc | 0.572 | m3/kmol | Cheméo Relay (1.0) |

## Sources

**Cheméo Relay (1.0):**
**Cheméo Relay (1.0, beta):**
**NIST Webbook:** http://webbook.nist.gov/cgi/cbook.cgi?ID=C6410566&Units=SI
**McGowan Method:** http://link.springer.com/article/10.1007/BF02311772
**Crippen Method:** http://pubs.acs.org/doi/abs/10.1021/ci990307l
**Crippen Method:** https://www.chemeo.com/doc/models/crippen_log10ws

# Legend

| | |
|---|---|
| **af:** | Acentric Factor |
| **gf:** | Standard Gibbs free energy of formation |
| **hf:** | Enthalpy of formation at standard conditions |
| **hvap:** | Enthalpy of vaporization at standard conditions |
| **ie:** | Ionization energy |
| **log10ws:** | Log10 of Water solubility in mol/l |
| **logp:** | Octanol/Water partition coefficient |
| **mcvol:** | McGowan's characteristic volume |
| **pc:** | Critical Pressure |
| **tb:** | Normal Boiling Point Temperature |
| **tc:** | Critical Temperature |
| **tf:** | Normal melting (fusion) point |
| **vc:** | Critical Volume |

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