# Phosphonic acid, diethyl ester

**Other names**: Diethoxyphosphine oxide; Diethyl acid phosphite; Diethyl hydrogen phosphite; Diethyl phosphonate; Ethyl phosphonate ((EtO)2HPO); Hydrogen diethyl phosphite; NSC 2665; O,O-Diethyl phosphonate; OPH(OC2H5)2; Phosphonic acid, diethyl ester; Phosphorous acid, diethyl ester.

**InChI**: InChI=1S/C4H11O3P/c1-3-6-8(5)7-4-2/h8H,3-4H2,1-2H3

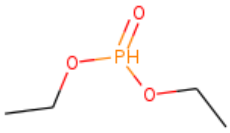
**InChI Key**: MJUJXFBTEFXVKU-UHFFFAOYSA-N

**Formula**: C4H11O3P

**SMILES**: CCO[PH](=O)OCC

**Molecular Weight**: 138.10

**CAS**: 762-04-9




## Physical Properties

| Property | Value | Unit | Source |
|---|---|---|---|
| $\Delta_{vap}H°$ | 49.30 | kJ/mol | NIST Webbook |
| IE | 10.31 | eV | NIST Webbook |
| IE | 10.31 | eV | NIST Webbook |
| *log*$P_{oct/wat}$ | 1.45 | | Crippen Method |

## Temperature Dependent Properties

| Property | Value | Unit | Temperature (K) | Source |
|---|---|---|---|---|
| $\Delta_{vap}H$ | 38.10 | kJ/mol | 404.5 | NIST Webbook |

## Sources

**NIST Webbook**:
http://webbook.nist.gov/cgi/inchi/InChI=1S/C4H11O3P/c1-3-6-8(5)7-4-2/h8H,3-4H2,1-2H3

**Crippen Method**: http://pubs.acs.org/doi/abs/10.1021/ci990307l

## Legend

$\Delta_{vap}$**H°**: Enthalpy of vaporization at standard conditions (kJ/mol).

$\Delta_{vap}$**H**: Enthalpy of vaporization at a given temperature (kJ/mol).
**IE**: Ionization energy (eV).
***log*P$_{oct/wat}$**: Octanol/Water partition coefficient .