

Trimethylphosphine

Other names:	Phosphine, trimethyl- Trimethylphosphorus (CH ₃) ₃ P
Inchi:	InChI=1S/C3H9P/c1-4(2)3/h1-3H3
InchiKey:	YWWDBCWQNCYNR-UHFFFAOYSA-N
Formula:	C ₃ H ₉ P
SMILES:	CP(C)C
Mol. weight [g/mol]:	76.08
CAS:	594-09-2

Physical Properties

Property code	Value	Unit	Source
affp	958.80	kJ/mol	NIST Webbook
basg	926.30	kJ/mol	NIST Webbook
ie	8.11	eV	NIST Webbook
ie	8.10 ± 0.10	eV	NIST Webbook
ie	8.79	eV	NIST Webbook
ie	8.01 ± 0.07	eV	NIST Webbook
ie	8.60 ± 0.20	eV	NIST Webbook
ie	9.20 ± 0.50	eV	NIST Webbook
ie	8.62 ± 0.05	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.12	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.65	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.60	eV	NIST Webbook
ie	8.60 ± 0.10	eV	NIST Webbook
ie	8.62	eV	NIST Webbook
log10ws	3.07		Crippen Method
logp	1.358		Crippen Method
mcvol	73.590	ml/mol	McGowan Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hvapt	28.90	kJ/mol	279.00	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C594092&Units=SI

Legend

affp:	Proton affinity
basg:	Gas basicity
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume

Latest version available from:

<https://www.chemeo.com/cid/23-244-5/Trimethylphosphine.pdf>

Generated by Cheméo on 2025-12-22 02:43:16.791788384 +0000 UTC m=+6119594.321829039.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.