

# Phosphorus trichloride

<b>Other names:</b>	PCl <sub>3</sub> Phosphorus chloride Phosphorus(III) chloride Phosphorous trichloride Chloride of phosphorus Fosforo(tricloruro di) Fosfortrichloride Phosphore(trichlorure de) Phosphorous chloride Phosphortrichlorid Trojchlorek fosforu UN 1809 Phosphorus chloride (pcl3) Phosphine, trichloro- Phosphorus chloride (cl6p2) Trichlorophosphine
<b>Inchi:</b>	InChI=1S/Cl3P/c1-4(2)3
<b>InchiKey:</b>	FAIAAWCVCHQXDN-UHFFFAOYSA-N
<b>Formula:</b>	Cl <sub>3</sub> P
<b>SMILES:</b>	ClP(Cl)Cl
<b>Mol. weight [g/mol]:</b>	137.33
<b>CAS:</b>	7719-12-2

## Physical Properties

Property code	Value	Unit	Source
ea	0.82 ± 0.10	eV	NIST Webbook
ea	3.61	eV	NIST Webbook
ie	10.50	eV	NIST Webbook
ie	9.90 ± 0.01	eV	NIST Webbook
ie	9.90 ± 0.10	eV	NIST Webbook
ie	10.50 ± 0.10	eV	NIST Webbook
ie	10.18 ± 0.10	eV	NIST Webbook
ie	9.91	eV	NIST Webbook
ie	10.52	eV	NIST Webbook
ie	9.90 ± 0.01	eV	NIST Webbook
ie	10.52	eV	NIST Webbook
ie	10.51	eV	NIST Webbook

ie	10.52 ± 0.03	eV	NIST Webbook
ie	10.54	eV	NIST Webbook
log10ws	0.89		Crippen Method
logp	2.930		Crippen Method
mcvol	68.040	ml/mol	McGowan Method
tc	564.00 ± 2.00	K	NIST Webbook
vc	0.237 ± 0.005	m <sup>3</sup> /kmol	NIST Webbook

## Sources

<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci9903071">http://pubs.acs.org/doi/abs/10.1021/ci9903071</a>
<b>Crippen Method:</b>	<a href="https://www.cheméo.com/doc/models/crippen_log10ws">https://www.cheméo.com/doc/models/crippen_log10ws</a>
<b>McGowan Method:</b>	<a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>
<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C7719122&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C7719122&amp;Units=SI</a>

## Legend

<b>ea:</b>	Electron affinity
<b>ie:</b>	Ionization energy
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>tc:</b>	Critical Temperature
<b>vc:</b>	Critical Volume

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