

# Phosphoryl fluoride

<b>Other names:</b>	POF3 Phosphorus oxyfluoride Phosphoryl trifluoride Trifluorophosphine oxide Trifluorophosphorus oxide
<b>Inchi:</b>	InChI=1S/F3OP/c1-5(2,3)4
<b>InchiKey:</b>	FFUQCRZBKUBHQT-UHFFFAOYSA-N
<b>Formula:</b>	F3OP
<b>SMILES:</b>	O=P(F)(F)F
<b>Mol. weight [g/mol]:</b>	103.97
<b>CAS:</b>	13478-20-1

## Physical Properties

Property code	Value	Unit	Source
affp	694.00	kJ/mol	NIST Webbook
basg	664.20	kJ/mol	NIST Webbook
ie	12.76 ± 0.01	eV	NIST Webbook
ie	13.34	eV	NIST Webbook
ie	12.77 ± 0.04	eV	NIST Webbook
ie	12.75	eV	NIST Webbook
log10ws	-2.65		Crippen Method
logp	2.003		Crippen Method
mvol	42.500	ml/mol	McGowan Method

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	2.16613e+01
Coeff. B	-3.56796e+03
Coeff. C	-2.42600e+01
Temperature range (K), min.	149.15
Temperature range (K), max.	233.45

# Sources

<b>NIST Webbook:</b>	<a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C13478201&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C13478201&amp;Units=SI</a>
<b>The Yaws Handbook of Vapor Pressure:</b>	<a href="https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure">https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure</a>
<b>Crippen Method:</b>	<a href="http://pubs.acs.org/doi/abs/10.1021/ci990307I">http://pubs.acs.org/doi/abs/10.1021/ci990307I</a>
<b>Crippen Method:</b>	<a href="https://www.chemeo.com/doc/models/crippen_log10ws">https://www.chemeo.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>

# Legend

<b>affp:</b>	Proton affinity
<b>basg:</b>	Gas basicity
<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>pvap:</b>	Vapor pressure

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