Phosphorus dimer

Inchi: InChI=1S/P2/c1-2
InchiKey: FOBPTJZYDGNHLR-UHFFFAOYSA-N
Formula: P2
SMILES: P#P
Mol. weight [g/mol]: 61.95
CAS: 12185-09-0

Physical Properties

Property code	Value	Unit	Source
ea	0.63 ± 0.05	eV	NIST Webbook
ea	0.59 ± 0.03	eV	NIST Webbook
ea	0.65	eV	NIST Webbook
ea	0.24 ± 0.23	eV	NIST Webbook
hf	144.00 ± 2.00	kJ/mol	NIST Webbook
ie	10.84	eV	NIST Webbook
ie	10.53	eV	NIST Webbook
ie	11.70 ± 0.50	eV	NIST Webbook
ie	10.53	eV	NIST Webbook
ie	10.57 ± 0.00	eV	NIST Webbook
ie	10.30 ± 0.50	eV	NIST Webbook
ie	9.70	eV	NIST Webbook
ie	10.60	eV	NIST Webbook
ie	9.70 ± 0.50	eV	NIST Webbook
ie	11.20	eV	NIST Webbook
ie	10.70 ± 0.10	eV	NIST Webbook
ie	11.00 ± 0.30	eV	NIST Webbook
ie	9.60 ± 0.30	eV	NIST Webbook
ie	11.80 ± 0.50	eV	NIST Webbook
ie	10.62 ± 0.01	eV	NIST Webbook
log10ws	5.71		Crippen Method
logp	1.722		Crippen Method
mcvol	43.180	ml/mol	McGowan Method
sgb	218.12 ± 0.00	J/mol×K	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C12185090&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

ea:	Electron affinity
hf:	Enthalpy of formation at standard conditions
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
sgb:	Molar entropy at standard conditions (1 bar)

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