

Silane

Other names:	Monosilane SiH4 Silicane Silicon hydride Silicon hydride (SiH4) Silicon tetrahydride UN 2203
Inchi:	InChI=1S/H4Si/h1H4
InchiKey:	BLRPTPMANUNPDV-UHFFFAOYSA-N
Formula:	H4Si
SMILES:	[SiH4]
Mol. weight [g/mol]:	32.12
CAS:	7803-62-5

Physical Properties

Property code	Value	Unit	Source
affp	639.70	kJ/mol	NIST Webbook
basg	613.40	kJ/mol	NIST Webbook
ie	11.00 ± 0.02	eV	NIST Webbook
ie	11.20 ± 0.10	eV	NIST Webbook
ie	11.00 ± 0.02	eV	NIST Webbook
ie	11.70	eV	NIST Webbook
ie	11.60	eV	NIST Webbook
ie	11.66	eV	NIST Webbook
ie	12.30	eV	NIST Webbook
log10ws	3.59		Crippen Method
logp	-1.452		Crippen Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43915e+01

Coeff. B	-1.62306e+03
Coeff. C	5.07000e+00
Temperature range (K), min.	88.15
Temperature range (K), max.	269.70

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C7803625&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

affp:	Proton affinity
basg:	Gas basicity
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
pvap:	Vapor pressure

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