

1,3,5,7,9-Pentathiepane

Other names:	1,3,5,7,9-Pentathiacyclodecane
Inchi:	InChI=1S/C5H10S5/c1-6-2-8-4-10-5-9-3-7-1/h1-5H2
InchiKey:	OORAADWLEVSLPL-UHFFFAOYSA-N
Formula:	C5H10S5
SMILES:	C1SCSCSCSCS1
Mol. weight [g/mol]:	230.46
CAS:	2372-99-8

Physical Properties

Property code	Value	Unit	Source
gf	174.28	kJ/mol	Joback Method
hf	129.79	kJ/mol	Joback Method
hfus	9.35	kJ/mol	Joback Method
hvap	57.21	kJ/mol	Joback Method
log10ws	-3.70		Crippen Method
logp	3.454		Crippen Method
mcvol	152.200	ml/mol	McGowan Method
pc	5175.72	kPa	Joback Method
tb	594.25	K	Joback Method
tc	931.61	K	Joback Method
tf	560.90	K	Joback Method
vc	0.448	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	307.16	J/molxK	594.25	Joback Method
cpg	324.54	J/molxK	650.48	Joback Method
cpg	340.21	J/molxK	706.70	Joback Method
cpg	354.16	J/molxK	762.93	Joback Method
cpg	366.42	J/molxK	819.15	Joback Method
cpg	376.99	J/molxK	875.38	Joback Method
cpg	385.89	J/molxK	931.61	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C2372998&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

cpg:	Ideal gas heat capacity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvpap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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