Disulfide, bis(4-chlorophenyl)

Other names:	1,2-bis(4-chlorophenyl)disulfane
	4,4'-Dichlorodiphenyl disulfide
	4-Chlorophenyl disulfide
	Bis(4-chlorophenyl) disulfide
	Bis(p-chlorophenyl) disulfide
	DDDS
	DDDS (pesticide)
	Di(p-chlorophenyl) disulfide
	Disulfide, bis(p-chlorophenyl)
	NSC 32025
	NSC 677444
	bis(4-chlorophenyl) disulphide
	bis(4-chlorophenyl)disulfide
	p,p'-Dichlorodiphenyl disulfide
	p-Chlorophenyl disulfide
Inchi:	InChI=1S/C12H8Cl2S2/c13-9-1-5-11(6-2-9)15-16-12-7-3-10(14)4-8-12/h1-8H
InchiKey:	ZIXXRXGPBFMPFD-UHFFFAOYSA-N
Formula:	C12H8Cl2S2
SMILES:	Clc1ccc(SSc2ccc(Cl)cc2)cc1
Mol. weight [g/mol]:	287.23
CAS:	1142-19-4

Physical Properties

Property code	Value	Unit	Source
gf	298.10	kJ/mol	Joback Method
hf	211.37	kJ/mol	Joback Method
hfus	30.79	kJ/mol	Joback Method
hvap	70.59	kJ/mol	Joback Method
log10ws	-6.13		Crippen Method
logp	5.793		Crippen Method
mcvol	189.600	ml/mol	McGowan Method
pc	3163.27	kPa	Joback Method
tb	749.70	K	Joback Method
tc	1044.67	K	Joback Method
tf	431.52	K	Joback Method
vc	0.698	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	418.82	J/mol×K	749.70	Joback Method
cpg	430.60	J/mol×K	798.86	Joback Method
cpg	440.99	J/mol×K	848.02	Joback Method
cpg	450.05	J/mol×K	897.18	Joback Method
cpg	457.85	J/mol×K	946.35	Joback Method
cpg	464.46	J/mol×K	995.51	Joback Method
cpg	469.95	J/mol×K	1044.67	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Solubilities of 4,4'-Dichlorodiphenyl Disulfide in Six Organic Solvents between (303.15 and 333.15) K:	https://www.doi.org/10.1021/je301243f
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1142194&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
hvap:	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