Methyl parathion

Other names:

8056HC
Azofos
Azophos
BAY 11405
Bladan M
Cekumethion
DALF
Devithion
Dimethyl 4-nitrophenyl phosphorothioate
Dimethyl 4-nitrophenyl phosphorothionate
Dimethyl p-Nitrophenyl phosphorothionate
Dimethyl p-nitrophenyl thiophosphate
Dimethyl parathion
ENT 17292
Folidol 600
Folidol M
Folidol M-40
M-Parathion
Meptox
Metacid 50
Metacide
Metafos
Metaphos
Methyl-E 605
Methyl-bladan
Methylthiophos
Metron
Metron (pesticide)
Nitrox
Nitrox 80
O,O-Dimethyl O-(p-nitrophenyl) phosphorothioate
O,O-Dimethyl O-(p-nitrophenyl) thionophosphate
O,O-Dimethyl O-(p-nitrophenyl) thiophosphate
O,O-Dimethyl O-4-nitrophenyl phosphorothioate
O,O-dimethyl-O-(4-nitrophenyl) thiophosphate
OMS 213
Oleovofotox
Parataf
Parathion methyl
Parathion methyl homolog

Paratox
Paratuf
Partron M
Penncap M
Penncap MLS
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester
Phosphorothioic acid, O,O-dimethyl O-(p-nitrophenyl) ester
Quinophos
Sinafid M-48
Tekwaisa
Thiophenit
Vofatox
Wofatox
Wofotox
Yphos

Inchi: InChI=1S/C8H10NO5PS/c1-12-15(16,13-2)14-8-5-3-7(4-6-8)9(10)11/h3-6H,1-2H3
InchiKey: RLBIQVVOMOPOHC-UHFFFAOYSA-N
Formula: C8H10NO5PS
SMILES: COP(=S)(OC)Oc1ccc([N+](=O)[O-])cc1
Mol. weight [g/mol]: 263.21
CAS: 298-00-0

Physical Properties

Property code	Value	Unit	Source
log10ws	-3.68		Aqueous Solubility Prediction Method
logp	2.491		Crippen Method
mcvol	171.660	ml/mol	McGowan Method
rinpol	1840.00		NIST Webbook
rinpol	1878.00		NIST Webbook
rinpol	1905.00		NIST Webbook
rinpol	1856.00		NIST Webbook
rinpol	1903.00		NIST Webbook
rinpol	1845.00		NIST Webbook
rinpol	1855.00		NIST Webbook
rinpol	1840.00		NIST Webbook
rinpol	1895.00		NIST Webbook
rinpol	1851.00		NIST Webbook
rinpol	1896.00		NIST Webbook
rinpol	1899.00		NIST Webbook

rinpol	1843.00		NIST Webbook
rinpol	1851.00		NIST Webbook
rinpol	1851.00		NIST Webbook
rinpol	1896.00		NIST Webbook
rinpol	1851.00		NIST Webbook
rinpol	1856.00		NIST Webbook
tf	308.90	K	Aqueous Solubility Prediction Method
tf	309.24 ± 0.20	K	NIST Webbook
tf	308.90 ± 0.10	K	NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hfust	20.07	kJ/mol	308.20	NIST Webbook
hsubt	125.10	kJ/mol	303.00	NIST Webbook
hsubt	108.70	kJ/mol	283.00	NIST Webbook
hvapt	88.90	kJ/mol	360.00	NIST Webbook

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C298000&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
Aqueous Solubility Prediction Method: http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa

Legend

hfust: Enthalpy of fusion at a given temperature
hsubt: Enthalpy of sublimation at a given temperature
hvapt: Enthalpy of vaporization at a given temperature
log10ws: Log10 of Water solubility in mol/l
logp: Octanol/Water partition coefficient
mcvol: McGowan's characteristic volume
rinpol: Non-polar retention indices
tf: Normal melting (fusion) point