«lambda»-Cyhalothrin

Other names:

Cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-,cyano(3-phenoxyphenyl)methyl ester, (1-«alpha»(S*),3-«alpha»(Z))- (.+/-.)-

Karate

PP 321

[1«alpha»(S*),3«alpha»(Z)]-(.+/-.)-Cyano-(3-phenoxyphenyl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate

Charge

Commodore

Excalibur

Hallmark

Icon

Matador

Lambda cyhalothrin

(R)-Cyano(3-phenoxyphenyl)methyl 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-2,2-dimethylcyclopropanecarboxylate, (1S,3S)-rel-

Cyhalothrin (lambda)

Cyclopropanecarboxylic acid, 3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propen-1-yl]-2,2-dimethyl-, (R)-cyano(3-phenoxyphenyl)methyl ester, (1S,3S)-rel-

Cyhalothrin,K

(R)-cyano(3-phenoxyphenyl)methyl (1S,3S)-rel-3-[(1Z)-2-chloro-3,3,3-trifluoro-1-propenyl]-2,2-dimethylcyclopropanecarboxyla

Inchi: InChI=1S/C23H19ClF3NO3/c1-22(2)17(12-19(24)23(25,26)27)20(22)21(29)31-18(13-28)

InchiKey: DFVKOWFGNASVPK-QQDHXZELSA-N

Formula: C23H19ClF3NO3

SMILES: CC1(C)C(C=C(Cl)C(F)(F)F)C1C(=O)OC(C#N)c1ccc(Oc2ccccc2)cc1

Mol. weight [g/mol]: 449.85

CAS: 91465-08-6

Physical Properties

Property code	Value	Unit	Source
gf	-332.22	kJ/mol	Joback Method
hf	-731.91	kJ/mol	Joback Method
hfus	43.87	kJ/mol	Joback Method
hvap	92.48	kJ/mol	Joback Method
log10ws	-7.20		Crippen Method
logp	6.544		Crippen Method
mcvol	304.490	ml/mol	McGowan Method
pc	1318.48	kPa	Joback Method
tb	1018.02	K	Joback Method
tc	1260.66	K	Joback Method
tf	607.14	K	Joback Method

vc	1.196	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	977.31	J/mol×K	1018.02	Joback Method
cpg	995.35	J/mol×K	1058.46	Joback Method
cpg	1013.87	J/mol×K	1098.90	Joback Method
cpg	1033.11	J/mol×K	1139.34	Joback Method
cpg	1053.34	J/mol×K	1179.78	Joback Method
cpg	1074.81	J/mol×K	1220.22	Joback Method
cpg	1097.78	J/mol×K	1260.66	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C91465086&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
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
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