Beta –cypermethrin

Common name: beta-cypermethrin

IUPAC name: a reaction mixture comprising two enantiomeric pairs in ratio *c*.2:3 (S)- α -cyano-3-phenoxybenzyl (1*R*)-*cis*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and (*R*) - α -cyano-3-phenoxybenzyl (1*S*)-*cis*-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropane= carboxylate with (S)- α -cyano-3-phenoxybenzyl (1*R*)-*trans*-3-(2,2-dichlorovinyl)-= 2,2- dimethylcyclopropanecarboxylate and (*R*) - α -cyano-3-phenoxybenzyl (1*S*)-*trans*-3= (2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

Chemical Abstracts name: cyano(3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethyl =cyclopropanecarboxylate; 2 parts of enantiomer pair [(1*R*)-1 α (*S**),3 α] and [(1 *S*)-1 α (*R* *),3 α] with 3 parts of enantiomer pair [(1*R*)-1 α (*S**),3 β] and [(1 *S*)-1 α (*R* *),3 β]

Molecular weight: 416.3

Molecular formula: $C_{22}H_{19}Cl_2NO_3$

Formulation: 4.5% EC

Applications

Biochemistry

Acts on the nervous system of insects, and disturbs the function of neurous by interaction with the sodium channel.

Mode of action

Non-systemic insecticide with contact and stomach action.

Uses

Can be used against a wide range of insect pests in public health(e.g. flies, cockroaches, mosquitoes, fleas, lice, bugs) and in veterinary applications(ectoparasitic ticks and mites). In plant protection, effective against Orthoptera, Diptera, Hemiptera, and Homoptera. Mainly used in alfalfa, cereals, cotton, grapes, maize, oilseed rape, pome fruit, potatoes, soya beans, sugar beet, tobacco and vegetables. Applied at 10-27ml/ha.

4.5% EC characteristics:

Item	Index
Appearance	Even liquid
Content, %	4.5
Water, %	≤0.5
PH value	4.0-6.0

TC characteristics:

Item	Index		
	Best grade	First grade	Standard product
Content, %	99.0	95.0	92.0
Water, % ≤	0.1	0.3	0.5
PH value	4.0-6.0		

Storage and transportation:

Put in a ventilated and dry place. Keep away from food, seed and feed. Do not touch eyes, skin and be absorbed by mouth and nose..