

Malathion

Common name: malathion

IUPAC name: diethyl(dimethoxythiophosphorylthio)succinate; *S*-1,2-bis(ethoxycarbonyl)ethyl *O,O*-dimethyl phosphorodithioate

Chemical Abstracts name: diethyl[(dimethoxyphosphinothioyl)thio]butanedioate

Molecular weight: 330.4

Molecular formula: C₁₀H₁₉O₆PS₂

Formulation: 45% EC

Applications

Biochemistry

Cholinesterase inhibitor; proinsecticide, activated by metabolic oxidative desulfuration to the corresponding oxon.

Mode of action

Non-systemic insecticide and acaricide with contact, stomach, and respiratory action.

Uses

Used to control Coleoptera, Diptera, Hemiptera, Hymenoptera and Lepidoptera in a wide range of crops, including cotton, pome, soft and stone fruit, potatoes, rice and vegetables. Applied at 371.5-749.25g/ha.

45%EC characteristics:

Item	Index
Appearance	Even liquid
Content, %	45
Water, %	≤0.3
Acid(calculated by H ₂ SO ₄)	≤0.5

TC characteristics:

Item	Index		
	Best grade	First grade	Standard product
Content, %	95.0	90.0	85.0
Water, % ≤	0.1	0.2	0.2
Acid(calculated by H ₂ SO ₄), ≤	0.5		
Acetone insoluble, ≤	0.5		

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..