Alpha-cypermethrin WP : Indian Standard IS 15603:2005

Alpha-cypermethrin *is a synthetic pyrethroid insecticide used to control a wide variety of pests, including agricultural insects, household pests, and stored-product pests. It works by disrupting the nervous system of insects, leading to paralysis and death. Alpha-cypermethrin is known for its fast action and relatively low toxicity to humans and animals when used correctly. It is commonly applied as a spray or dust in both agricultural and domestic settings. However, it can be toxic to aquatic life, so caution is needed to prevent contamination of water sources. Although it degrades relatively quickly in the environment, proper handling and safety measures should always be followed to minimize health and environmental risks.*

Target Pests*: It is effective against a broad spectrum of pests including:*

- ***Agricultural pests****: such as aphids, beetles, caterpillars, and weevils.*
- ***Domestic pests****: including ants, cockroaches, and termites.*
- ***Stored-product pests****: such as grain weevils and flour beetles.*

The ***Indian Standard IS 15603:2005*** *specifies the requirements for Alphacypermethrin WP, an insecticide formulation containing 5% (m/m) alphacypermethrin technical. The formulation must be a homogeneous, free-flowing, whitish powder that readily wets when mixed with water. Key technical criteria include a minimum of 98% passing through a 75-micron IS sieve, a minimum suspensibility of 70% by mass, and a maximum wettability time of 120 seconds.*

The tolerance limits for alphacypermethrin content vary: ±10/-5% for nominal values up to 9%, ±5% for values between 9% and 50%, and +5/-3% for values above 50%. Additionally, the acidity or alkalinity (as H2SO4/NaOH) must not exceed 0.15% w/w.

The standard outlines specific packaging and labelling requirements, along with sampling procedures. Testing criteria differ for products inspected within 90 days of manufacture compared to those inspected afterward, ensuring consistent quality and effectiveness in application.