



Pesticide
Fact Sheet

Name of Chemical: Cuprous Chloride
Reason for Issuance: New Chemical Registration
Date Issued:

DESCRIPTION OF CHEMICAL

Generic Name: Cuprous Chloride
Common Name: Cuprous Chloride
Trade Names: Cuprous Chloride Technical
Migratrol R001
EPA Chemical Code: 108303
Chemical Abstracts
Service (CAS)
Number: 7758-89-6
Year of Initial
Registration: 1998
Pesticide Type: Plant Growth Regulator
Chemical Family: Copper compounds
U.S. and Foreign
Producers: Premium Compounded Products, LLC

USE PATTERNS AND FORMULATIONS

Cuprous chloride is used to control root growth of plants grown in nursery pots into which the active ingredient is incorporated. Cuprous Chloride will be formulated into two products: Cuprous Chloride Technical and Migratrol R001. The new product Migratrol R001 is a manufacturing use product intended for use, in manufacturing a "masterbatch product" which is a mixture of cuprous chloride and plastic. The low density polyethylene masterbatch containing cuprous chloride will be added to high density polyethylene for the purposes of making flower pots. A masterbatch is a concentrated form of a plastic/ingredient mixture which is in turn incorporated into a finished product in quantities that allow more precise control over the concentration of the individual ingredients. The copper ions in the plastic pot retard root growth when roots reach the pot wall. This prevents root circling and promotes healthier plant root systems.

SCIENCE FINDINGS

Summary Science Statements

Adequate chemistry, toxicological, ecological effects, and environmental fate data have been submitted and reviewed to support registration of cuprous chloride as a new active ingredient.

Toxicological Characteristics

Cuprous chloride is classified as toxicity category I [DANGER] for primary eye irritation; for acute oral toxicity it is classified category II [WARNING]; acute dermal is classified category II [WARNING]; acute inhalation toxicity is classified III [CAUTION]; and primary dermal irritation is classified category I [DANGER]. The dermal sensitization studies were POSITIVE.

There is adequate information available to characterize the toxicity of the copper ion. Copper is ubiquitous in nature and is a necessary nutritional element for both animals and plants. It is one of 26 elements found essential to life. The copper ion is present in the adult human body at levels of 80-150 milligram. Oral ingestion of excessive amounts of the copper ion from pesticidal uses is unlikely; copper compounds are irritating to the gastric mucosa and emesis usually occurs promptly, thereby reducing the amount of copper ion available for absorption into the human body. Only a small percentage of copper ingested is absorbed, and most the absorbed copper is excreted. In view of the facts that the copper ion occurs naturally in most foods and the metabolism of copper is well understood, there is no reason to expect that long-term exposure to copper ion in the diet is likely to pose the risk of chronic or sub-chronic adverse effects.

Environmental Fate

The use of cuprous chloride, formulated as a root growth regulator agent in plastic plant containers does not constitute any environment fate and transport issues. The environmental exposure from the proposed use pattern is expected to be low because the cuprous chloride is impregnated into the plastic matrix of plant growth containers.

Ecological Effects

It is unlikely that cuprous chloride would cause significantly different fish and wildlife effects than the numerous other copper compounds which are already registered.

OCCUPATIONAL EXPOSURE

It is unlikely that the occupational exposure risk for cuprous chloride would differ significantly from the numerous other copper compounds which are already registered.

Chemical Characteristics

Color: Gray tan or light green
State: Solid powder
Odor: Odorless
Stability: Stable
pH: 4.8 to 5.0
Melting point >430 degrees C
Density: 4.14
Water Solubility: .62 g/100 g water
Vapor Pressure: 1.3 at 546 degrees C

Toxicology CharacteristicsCuprous Chloride Technical
Migratrol RO01

Acute Oral
Toxicity
Category: II

Acute Dermal
Toxicity
Category: II

Acute Inhalation
Toxicity
Category: III

Primary Eye
Irritation
Toxicity
Category: I

Primary Skin
Irritation
Toxicity
Category: I

Dermal
Sensitization POSITIVE

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