

Material Safety Data Sheet

קודקוד - Kodkod

Revised: 10.08.10

1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Common name: Kodkod

Use: Insecticide

Formulation Type: SC

Manufacturer: Tapazol Chemical works ltd.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Quantity (g/l)
Imidacloprid (1-(6-chloro-3-pyridylmethyl)-N-nitroimidazolidin-2-ylideneamine)	138261-41-3	350
Inert ingredients	N/A	650

Chemical Formula of Active Ingredient: $C_9H_{10}ClN_5O_2$

3. HAZARDS IDENTIFICATION

The product is harmful by ingestion and in contact with skin and may cause mild skin and eye irritation.



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4. FIRST AID MEASURES

Eyes: Flush eyes with large amount of water. If irritation persists, get medical attention.

Skin: Flush with large amount of water; use soap or detergent if available. Remove contaminated clothing, including shoes, and launder before reuse. If irritation persists, get medical attention.

Ingestion: If swallowed, drink 1-2 glasses of water. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get medical attention immediately.

Inhalation: Wear proper respiratory protection before rescues. Immediately remove affected victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Note to physician: No specific antidote, treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash point: >100°C.

Flammable properties: Negligible fire and explosion hazard. Not flammable.

Extinguishing media: Foam, carbon dioxide, dry chemical or water foag.

Protective equipment: Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full-face piece operated in the pressure demand or other positive pressure mode.

Hazardous products of combustion may include: May emit toxic fumes of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides if involved in fires or exposed to extreme heat.

Procedure: Keep unnecessary people away. Dike area of fire to prevent material run-off. Decontaminate emergency personnel with soap and water before leaving the fire area. Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water.

6. ACCIDENTAL RELEASE MEASURES

Personal protection: Wear personal protective equipment as prescribed in section 8 – "Exposure controls/Personal protection".

Environmental Protection: Avoid contact of spilled materials and runoff with soil and surface waterways.

Procedure: Absorb small spills on spill pillows or other suitable absorbing material (e.g. sand, soil or diatomaceous earth) and place in a sealed container for disposal.

Dike large spills and transfer to an appropriate container for disposal.

For spills in public area, keep public away and advise local authorities.

Wash clothes, equipment and work area after cleaning.

7. HANDLING AND STORAGE

Storage: Store in tightly closed original container in a cool, dry well-ventilated area out of direct sunlight and out of reach of children. Do not store with food, feedstuffs, fertilizers and seeds.

Handling: Wear personal protective equipment as prescribed in section 8 – "Exposure controls/Personal protection".

Do not eat, drink or smoke while handling.

Change clothes and wash thoroughly when finishing working with the product.

Wash working clothes in separate from household laundry and do not re-use clothes that are not washed.

See product label for further handling/storage precautions relative to the end use of this product.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls: Provide local exhaust or process enclosure ventilation system.

Eye/ Face protection: Safety glasses/face-shield.

Skin/Body protection: Chemically resistant gloves.

Respiratory protection: For maximum protection, wear a supplied air, full-face piece respirator, air-lined hood or full-face piece self contained breathing apparatus.

Hand protection: Long sleeved shirt, long pants and closed working shoes.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white viscous liquid.

Odor: Odorless.

Specific Gravity: 1.1.

Water solubility: Disperses in water.

Vapor pressure: 4×10^{-7} mPa (20°C, For AI Imidacloprid).

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal handling and storage conditions.

Conditions to avoid: Heat, flame, ignition sources, dusting and incompatibilities.

Incompatibilities: Avoid mixed with highly reactive chemicals such as strong acid, strong base or strong oxidizing agent.

Hazardous decomposition products: May emit toxic fumes of hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides if involved in fires or exposed to extreme heat.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral: LD50 for rat: >2000 mg/kg.

Dermal: LD50 for rat: >2000 mg/kg.

Inhalation: For AI Imidacloprid: >5.3 mg/l as dust, 0.069 mg/l as aerosol.

Skin irritation: Mild irritant (rabbit).

Eye irritation: minimal irritant (rabbit).

Skin sensitization: Non-sensitizer (mouse).

Chronic toxicity:

No evidence of carcinogenic, mutagenic, teratogenic or reproductive effects.

12. ECOLOGICAL INFORMATION

For AI Imidacloprid:

Kodcod may be toxic to birds and aquatic organisms. Avoid release to the environment in circumstances different to normal use.

Fish: LC50 (96h) for Golden orfe: 237 mg/l, for Rainbow trout: 211 mg/l.

Daphnia: LC50 (48h): 85 mg/l.

Algae: ErC50 (72h): >100 mg/l.

Birds: Acute oral LD50 for Japanese quail: 31 mg/kg, 152 mg/kg.

Dietary LC50 (5d) for Bobwhite quail: 2225 mg/kg, >5000 mg/kg.

Bees: Harmful to honeybees by direct contact, but no problems expected when not sprayed into flowering crops or when used as a seed treatment.

Environmental Fate:

Animals: After oral administration of methylene-¹⁴C- and 4,5-imidazolidine-¹⁴C-labelled imidacloprid to rats, the radioactivity was quickly and almost completely absorbed from the gastro-intestinal tract and quickly eliminated (96% within 48 hours, mainly via the urine). Only c. 15% was eliminated as unchanged parent compound; the most important metabolic steps were hydroxylation at the imidazolidine ring, hydrolysis to 6-chloronicotinic acid, loss of the nitro group with formation of the guanidine and conjugation of the 6-chloronicotinic acid moiety. Imidacloprid is also quickly largely eliminated from hens and goats.

Plants: Metabolism was investigated on rice (after soil treatment), maize (seed treatment), potatoes (granule or spray application), aubergines (granules) and tomatoes (spray treatment). In all cases, imidacloprid is metabolized by loss of the nitro group, hydroxylation at the imidazolidine ring, hydrolysis to 6-chloronicotinic acid and formation of conjugates; all metabolites contained the 6-chloropyridinylmethylenemoiety.

Soil/Environment: In laboratory studies, the most important metabolic steps were oxidation at the imidazolidine ring, reduction or loss of the nitro group, hydrolysis to 6-chloronicotinic acid and mineralisation; these processes were strongly accelerated by vegetation. Imidacloprid shows a medium adsorption of soil. Column leaching tests (with prior ageing) with a.i. and various formulations showed that imidacloprid and soil metabolites are to be classified as immobile; leaching into deeper soil layers is not to be expected if imidacloprid is used as recommended. Stable to hydrolysis under sterile conditions (under exclusion of light).

Environmental DT50 c. 4 h (calc., based on tests of direct photolysis in aqueous solutions). Besides sunlight, the microbial activity of a water/sediment system is an important factor for the degradation of imidacloprid.

13. DISPOSAL CONSIDERATIONS

Dispose of according to local regulations. Avoid entry of product into sewer system or water surfaces.

14. TRANSPORT INFORMATION

UN no.: Not classified as dangerous good.

Class: N/A

Packaging group: N/A

15. REGULATORY INFORMATION

R phrases:

R21/22: Harmful in contact with skin and if swallowed

R36/38: Irritating to eyes and skin

R52: Harmful to aquatic organisms

S phrases:

S1/2: Keep locked-up and out of reach of children

S13: Keep away from food, drink and animal feeding stuffs

S20: When using do not eat or drink.

S24/25: Avoid contact with skin and eyes.

16. OTHER INFORMATION

Disclaimer: The information provided by TAPAZOL CHEMICAL WORKS Ltd.

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