

Ammonium nonanoate (031802) Fact Sheet

Active Ingredient Name: Ammonium nonanoate

OPP Chemical Code: 031802

I. Description of the Active Ingredient

Ammonium nonanoate is closely related to other salts of fatty acids known as soap salts. The active ingredient is a C₉ saturated-chain fatty acid soap salt. It represents 40.0% by weight of the end use product, and is a clear, colorless to pale yellow liquid with a slight fatty acid odor. Ammonium nonanoate is a non-systemic, broad-spectrum contact herbicide that has no soil activity.

II. Use Sites, Target Pests, and Application Methods

- **Use Sites:** nurseries, greenhouses, landscapes, interiorscapes, food crops and non crop farmsteads.
- **Target Pests:** Ammonium nonanoate is to be used for the suppression and control of weeds including: grasses, vines, underbrush, annual/perennial plants, including moss, saplings, and tree suckers.
- **Application Methods:** Ammonium nonanoate can be applied using all standard methods of liquid herbicide application, including hand-held, boom, pressure, and hose-end sprayers. For use, the concentrate is diluted with water to a specified concentration. Application rates are up to a maximum concentration of 6.0 % by weight, corresponding to 2.4% by weight ammonium nonanoate, in water. For the active ingredient to be effective, the leaves of undesirable vegetation must be uniformly sprayed and thoroughly wetted. Application can be repeated as often as necessary to obtain the desired control.

III. Assessing Risks to Human Health

Whether a substance poses a risk to humans or other organisms depends on two factors: how toxic the substance is, and how much of it an organism is exposed to. Therefore, the EPA considers toxicity data and exposure data in deciding whether to approve a pesticide for use.

Ammonium nonanoate is closely related to other salts of fatty acids known as soap salts. The Agency concludes that no risks to human health will be expected from the use of ammonium salts of higher fatty acids (C₈-C₁₈ saturated and C₁₈ unsaturated) based on their low toxicity and the fact

that residues from pesticide uses are not likely to exceed the levels of naturally-occurring or intentionally-added fatty acids in commonly-eaten foods. Since ammonium nonanoate has the potential for eye, skin, and mucosal irritation, the Agency is requiring stringent precautionary labeling. Exposure and attendant risks are expected to be negligible for applicators when they follow the directions for use by wearing the appropriate personal protective equipment.

IV. Assessing Risks to the Environment

Ammonium nonanoate is expected to degrade rapidly, primarily via microbial action, with a half-life of perhaps less than one day. The Agency believes that ammonium nonanoate, when used as directed, will not persist in the environment. The data reviewed suggest that ammonium nonanoate is not very toxic to upland avian species or waterfowl by either acute or dietary exposure. The Soap Salts RED (EPA-738-F-92-013, September, 1992), states that ammonium nonanoate is slightly toxic to both warm water and cold water fish species, but is considered highly toxic to aquatic invertebrates. The use of ammonium nonanoate following label directions should not result in serious impact to aquatic invertebrates because it is not applied directly to water and undergoes very rapid microbial degradation in soil.

V. Regulatory Information

On August 18, 2005, the Agency received an application from Falcon Lab LLC, to register an ammonium nonanoate product, containing 40.0% by weight active ingredient. A notice of receipt of the application for registration of ammonium nonanoate as a new active ingredient for an end use product to control unwanted vegetation was published in the Federal Register on November 23, 2005. On September 21, 2006, the Agency granted the registration for an ammonium nonanoate product, containing 40.0% by weight active ingredient. The product mentioned above is the only registered biochemical pesticide product containing ammonium nonanoate as an active ingredient.

VI. Registrant Information

Racer Concentrate™ Non-Selective Herbicide (EPA Reg No 79766-1)
Falcon Lab, LLC.
1103 Norbee Drive
Wilmington, DE 19803

VII. Additional Contact Information

[Ombudsman, Biopesticides and Pollution Prevention Division](#) (7511P)
Office of Pesticide Programs
Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460