

Need to Know

- Straight talk for professionals about pests and pest control products

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Tempo® SC Ultra Insecticide and Suspend® SC Insecticide Formulation Advantages

Suspension concentrates (SC) like Tempo SC Ultra and Suspend SC are among the most popular liquid spray formulations used by professionals today. These pyrethroid insecticides provide fast knockdown and long residual control of a wide variety of insect pests. They are low in mammalian toxicity and are low odor.

How SC's are Formed

Suspension Concentrates are formed by suspending finely ground particles in water and/or oil solvents. Tempo SC Ultra and Suspend SC are both water based formulations and do not contain solvents. Surfactants are included in the formulation to help suspend the solid particles. Biocides are added to prevent microbial growth and extend the shelf life for the SC formulations. Under normal conditions, the shelf life for SC's is 2 years or longer.

Advantages and Disadvantages

One advantage of SC insecticide formulations is that the liquid is less messy to handle than wettable powder (WP) formulations. Less agitation is required to keep this formulation in suspension than for WP's. Also, because the formulation does not contain solvents it may be used on plants without concern for phytotoxicity. Once the spray has dried, particles or crystals of active ingredient remain on the surface where they are picked up by crawling insect pests (Fig. 1).

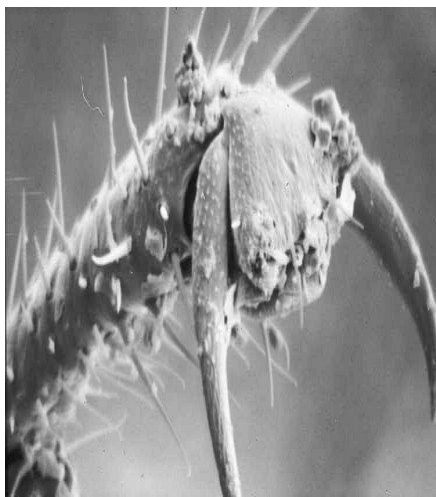


Fig. 1. Micro-crystals on the tarsi (leg) of a German cockroach.

Recent studies revealed that there are >100,000 micro-crystals of beta-cyfluthrin per square inch on surfaces treated with Tempo SC Ultra. By comparison, surfaces treated with Demand CS Insecticide are reported to have about 10,000 capsules per square inch. Unlike WP's there is little visible residue on surfaces sprayed with SC formulations.

Disadvantages for SC formulations are few. There can be minor separation or "settling out" that occurs in the SC container while in storage (especially if stored in extreme heat or cold). After a couple months in storage a minimal amount of the solids may settle out (Fig. 2).



Fig. 2. Example of separation or settling out of solid particles for Tempo SC Ultra Insecticide.

This separation does not adversely affect efficacy of the product, as long as the container is shaken before dispensing. **We recommend that Tempo or Suspend containers be shaken a few times before dispensing even if no separation is observed.**

Contributed by Dr. Gary Bransess and Brian James

