



**Home Grown & Locally Owned!**

## FREQUENTLY ASKED QUESTIONS ABOUT ELEMENTAL SULFUR

### What is elemental sulfur?

Sulfur is found naturally in soil, water, plants and animals. Sulfur is the fifth most abundant element, representing nearly 2% of the Earth's weight. It is essential to nearly all living things as part of proteins, vitamins, and many other biomolecules, and it is an essential nutrient in plants. Elemental sulfur (ES) has been used as a pesticide for thousands of years, and it has been registered in the U.S. as a pesticide in hundreds of products since the 1920s. In agricultural applications, ES can be used as an insecticide, an acaricide, a rodenticide, a repellent, a fertilizer, and a soil amendment to lower soil pH.

### How does elemental sulfur work as a pesticide?

ES kills fungi on contact, likely by affecting fungal cell respiration. ES acts as an insecticide through contact or ingestion and by altering insects' ability to produce energy.

### Where is elemental sulfur used as a pesticide?

ES is an active ingredient in pesticide products used on field crops, root crops, tree fruits, nuts, berries, vegetables, ornamentals, and turf. It is also approved for use around homes and on pets, livestock, and in barns.

### Is elemental sulfur approved for use on organic crops?

Yes. ES is approved for use on both conventional and organic crops to help control fungus and insect pests.

### Does elemental sulfur smell bad?

**No. ES is odorless, but upon application may have an initial odor similar to that of a struck match from trace amounts of SO<sub>2</sub> impurities in the product. This smell should quickly dissipate. Significant odor problems are not expected to occur at the labeled application use rates.**

### What happens to elemental sulfur in the environment?

ES in soil is slowly converted to sulfate by bacteria and is incorporated into the natural sulfur cycle. Sulfur is absorbed by plants as sulfate. ES does not dissolve well in water and it slowly leaches from soil in the form of sulfate. Therefore, runoff to water bodies is not expected to impact aquatic life. ES drift to areas close to a treated area can injure sulfur-sensitive plants. ES is nonvolatile and not expected to be present in air in significant amounts unless it is applied as a dust rather than in solution.

### Does elemental sulfur pose risks to people living in the areas of application?

There is a reasonable certainty of no harm when ES products are used according to label directions. ES exhibits low toxicities by the oral, dermal, and inhalation routes. It is not a dermal contact sensitizer or a skin irritant, and it is only slightly irritating to the eyes. ES is not a developmental or reproductive toxin, a mutagen, or a carcinogen. ES dust and one of its breakdown products, sulfur dioxide, may cause respiratory irritation at sufficiently high levels. However, ES has been deemed safe at the low exposure levels expected when used according to label directions. Both ES and sulfur dioxide are "Generally Recognized As Safe" by the U.S. FDA for use in food.

### Does elemental sulfur pose a risk to pets, wildlife, or livestock?

ES is generally considered non-toxic to mammals, birds, fish, and honey bees. There is no evidence to suggest that using sulfur as a pesticide poses unreasonable risk to the environment or to pets. While ruminant livestock are sensitive to high doses of sulfur, it is needed in their diet at low levels, and it does not cause health problems until it exceeds 0.3% of the diet.

\*\* Our Hi-Yield Dusting Wettable Sulfur and HY Soil Sulfur are "Elemental Sulfurs"

They do not or are not printed with the "elemental sulfur" text on them. I added it to this sheet as reference.



