

## QUESTIONS & ANSWERS

# DuPont™ Krenite® S

brush control agent

## *Herbicides, people and the environment*



### **Q. What should you know about the safety of herbicides?**

**A.** Herbicides are among the most rigorously tested products that are commercially marketed today. They rival human drugs for the extent of safety testing conducted before they reach the market. Tests are conducted to predict what types of effects these compounds could have on humans and the environment, and to determine the margin of safety associated with their use. If the Environmental Protection Agency (EPA) determines that the margin of safety is not sufficient to protect human health or the environment, the proposed uses must be modified, or the herbicides are not registered and cannot be marketed.

### **Q. What is the role of herbicides?**

**A.** The effective management of vegetation not only improves the aesthetics of an area, it can improve the safety along rights-of-way, reduce the growth of weeds that promote allergies, reduce the spread of unwanted vegetation to fields and gardens and reduce the potential of fires. Herbicides such as DuPont™ Krenite® S play an effective role in vegetation management programs. Herbicides offer an excellent alternative to mechanical methods like mowing, grading or the use of chain saws, both in terms of cost and reduced worker exposure to injury from equipment. Furthermore, mechanical methods can disrupt wildlife and scar the natural beauty of the area. However, should some form of mechanical control be required, it can be combined with a carefully prescribed herbicide program to provide the most effective management of unwanted vegetation.

### **Q. What is being sprayed on this site?**

**A.** The area is being treated with Krenite® S, a herbicide that is used to control certain types of brush and weed species along roadsides and other non-crop areas where vegetation can cause safety hazards or increase maintenance costs.

### **Q. Why was Krenite® S chosen?**

**A.** Before applying any herbicide, a maintenance or vegetation manager and his or her staff investigate a number of issues. They carefully evaluate a site's brush problems, soil type, location and desirable vegetation and choose a product that will best control the specific brush problem without harming the desirable vegetation or interfering with the local ecology. Cost effectiveness and ease of use also are probable considerations. Most likely, Krenite® S was chosen for this site because it offered the best available balance of these objectives.

### **Q. How does Krenite® S work?**

**A.** Krenite® S is a water-soluble liquid used as a foliar spray. It inhibits buds from forming in the spring. When

the brush is sprayed with Krenite® S during the summer or fall, brownout generally does not occur, but the following spring, species susceptible to Krenite® S fail to leaf out. The herbicide only affects the part of the plant where it is sprayed, and therefore has a trimming effect on the plant.

### **Q. Why is a herbicide needed?**

**A.** Herbicides such as Krenite® S provide a number of benefits.

The use of herbicides for the control of roadside vegetation results in better sight distance and enhanced visibility of signs, guardrails, vehicles and crossings, thus decreasing the likelihood of accidents occurring when motorists cannot see a warning sign or obstruction. It helps prevent flooding by removing vegetation that might block roadside passageways, thus allowing for proper drainage of road surfaces. Controlling high-growing vegetation that can cast shade on roadways allows the sun to shine directly on the pavement so it dries more quickly. In colder climates, controlling vegetation enhances ice and snow melt.

Control of vegetation also reduces the chance of animals being struck by vehicles, because when weeds are controlled near the road, animals are less likely to stray there. Control of weeds reduces fire hazards. It is most effective when applied at early stages of growth so little weed debris remains. Herbicides can be used to selectively control certain weeds or brush and encourage the growth of some plants to enhance the natural beauty of a landscape.

Vegetation in contact with utility lines presents service-interruption and fire hazards. At utility substations and along rights-of-way with power production lines, the use of herbicides is more effective than mechanical control because it controls weed foliage and roots to maintain weed-free surroundings. Mowing provides only temporary control. Also, in larger areas like utility rights-of-way, herbicides are more cost-effective.

### **Q. Krenite® S is mixed with water before it is sprayed. How does this affect its impact on humans, birds, animals and the environment?**

**A.** When diluted with water and used according to EPA-approved labeling, Krenite® S has a very low order of toxicity to applicators, bystanders and wildlife.

### **Q. Does Krenite® S pose any danger to humans?**

**A.** As noted, Krenite® S like all registered pesticides, has undergone years of extensive toxicological and environmental studies. The label addresses any significant health/environmental issues. Direct contact with this product or its spray may cause temporary eye irritation, as indicated on the product label. And, since any chemical

may be harmful when misused, it is important that label directions are followed.

**Q. Can Krenite® S cause cancer, birth defects or other illnesses?**

**A.** Krenite® S is a seasonal-use product with a single application per treatment area in a given year. Because of this, there is little likelihood for the chronic, daily exposures generally associated with cancer effects in animal models. The fact that Krenite® S does not produce genetic damage also suggests that it is not carcinogenic. Ninety-day studies with mice and rats did not uncover any evidence that Krenite® S causes reproductive effects, birth defects, precancerous effects or other significant adverse effects.

**Q. What if someone eats wild berries from a treated site?**

**A.** We do not recommend that humans eat wild berries that may have been treated by Krenite® S. However, laboratory tests with animals indicate there is a low potential for exposure due to the rapid degradation of the products on plants, its rapid elimination in animals and its infrequent application.

**Q. Should I be concerned if my children play near a site treated with Krenite® S?**

**A.** As with any chemical, we recommend keeping out of an area that has been treated recently. Agricultural workers are required to wear protective clothing if they must re-enter an area immediately following treatment, and others are advised not to enter recently treated areas before the spray has dried. This is to avoid any unnecessary chemical exposure.

**Q. What if someone inadvertently enters a site that has just been treated?**

**A.** Krenite® S is rapidly absorbed by the plant and is quickly metabolized. It is unlikely that any harmful effects will result from contact with wet foliage. However, if the spray contacts the skin or eyes, the area should be flushed with water.

**Q. What should I do if my pets walk through a site treated with Krenite® S?**

**A.** If there is contact, follow the same washing procedures as described above. However, we recommend keeping your pets out of a treated area.

**Q. How much of the treated foliage would my pet, or wildlife such as deer, have to eat before it would be harmed?**

**A.** Krenite® S is very low in toxicity to mammals, birds and insects. Based on its rapid degradation on plants and its rapid elimination in animals, any potential exposure would be limited to a very brief period immediately following

treatment. In fact, an animal would need to eat its own body weight or more in treated foliage to experience an adverse effect. Therefore, animals are not likely to eat enough foliage to cause any harm.

**Q. Will Krenite® S have a harmful effect on nearby drinking water supplies?**

**A.** Since Krenite® S generally degrades rapidly in the soil after application, there is little or no downward movement of the product; it should not penetrate to a water supply. Krenite® S has low toxicity; therefore, if it did reach a water supply, it would pose little threat to human health.

**Q. How toxic is Krenite® S to fish?**

**A.** Although not intended for aquatic uses, tests conducted on several fish species indicate low toxicity. Krenite® S presents no significant risk to fish when label directions are followed.

**Q. Does Krenite® S build up in the soil, other parts of the environment or the food chain?**

**A.** Krenite® S rapidly breaks down into nontoxic compounds. Under field conditions, Krenite® S is rapidly decomposed by soil microorganisms. If a pasture or pond were inadvertently sprayed with Krenite® S, animals and fish would naturally break down and excrete the product rapidly so it should not affect the food chain. This process is similar to normal bodily functions for other ingested, naturally occurring substances.

**Q. How are the unused chemicals and containers disposed of properly?**

**A.** The EPA-approved label outlines proper disposal of unused chemical solution and containers. Containers are triple-rinsed or pressure-rinsed, punctured and disposed of at approved waste disposal facilities. State and local authorities have their own regulations for disposal that every applicator must follow. Contact your state Department of Agriculture for more information.

**Q. Where can I get more information about Krenite® S and other DuPont herbicides?**

**A.** We encourage the public to become more knowledgeable about the proper use of Krenite® S brush control agent. You may obtain more Krenite® S product information (as well as other vegetation management and forestry herbicide information) by visiting our Vegetation Management Web page at [vm.dupont.com](http://vm.dupont.com).

*This reference guide is not intended as a substitute for the product label for the product(s) referenced herein. Product labels for the above product(s) contain important precautions, directions for use and product warranty and liability limitations that must be read before using the product. Applicators must be in possession of the product label(s) at the time of application. Always read and follow all label directions and precautions for use when using any pesticide alone or in tank mix combinations.*

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