



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MAR 14 2003

Mr. Jack H. Cain
U.S. Registration Manager
DuPont Crop Protection
E.I. duPont de Nemours
Stine-Haskell Research Center
P.O. Box 30
Newark, DE 19714-0030

Dear Mr. Cain:

Subject: DuPont® Krenite® S Herbicide
EPA Registration No. 352-595
Application and Your Letter Dated January 24, 2003,
Request To Amend Labeling as Follows:

1. Addition of Personal Protective Equipment Information.
2. Addition of DuPont-Adopted and Standardized, EPA Approved Resistance Management Language.
3. Addition of DuPont-Adopted and Standardized, EPA approved Integrated Pest Management Language.
4. Revision of Directions for Use Section for Clarity.
5. Addition of Agricultural Use Requirement Information.
6. Incorporation of Existing Special Local Need Labeling for Pine Plantation - Site Preparation Use.
7. Addition of Non-Agricultural Use Requirement Information.
8. Minor Formatting and Organizational Changes for Clarity.

The proposed subject labeling amendments for the pesticide product DuPont Krenite S Herbicide have been reviewed and found acceptable under the Federal Insecticide, Fungicide and Rodenticide Act, (FIFRA) as amended, provided that you:

1. Revise the added section name "Resistance" to read: "Tolerance in Weed Biotypes". If you insist on using the word "Resistance", the section may then be designated "Resistance in Weed Biotypes"

- 2. Revise the section as follows:
 - a: Revise the 1st sentence to read: "When herbicidesnaturally-occurring tolerant weed biotypes (or resistant weed biotypes) may survive a herbicide application, propagate, and become dominant in that field".
 - b. Delete the 2nd sentence. This statement does not connect with the following statements.
 - c. Revise the 3rd sentence to read: If weed control is unsatisfactory,a different biological mode of action".
 - d. First statement in the 2nd paragraph must read: "Subsequent applications of the same herbicide may not adequately control the tolerant (resistant) weed biotype".
 - e. The second sentence in 2nd paragraph must read: "To delay the proliferation and possible dominance of herbicide tolerant (resistant) weed biotypes it may be necessary to change cultural practices within and between crops by using a combination of tillage, tank-mix partners and/or sequential herbicide applications that have a different biological mode of action". Delete the next sentence.
 - f. Revise the 1st sentence in the 3rd paragraph to read: "It is advisable.....of tolerant (resistant) weed biotypes". Revise the next sentence to read: "Consult your state extension weed scientist for other methods for controlling the tolerant (resistant) biotypes that are present."
- 3. Delete the "Integrated Pest Management" section as it could be interpreted as being false and misleading under Section 156-10 of the Code of Federal Regulations.
- 4. Delete the heading "Temperate Wood Crops", and the words "natural" and "wildings" in the first sentence under the "Pine Plantations - Site Preparation" section; and add the word "species" following the word "hardwood" in that sentence.
- 5. Under the "Application Information" section revise the first sentence by deleting the words "the period".
- 6. Under "Use Rates" for "Pine Plantations - Site Preparation" section delete the word "residual" in first sentence. And, in the second paragraph delete the words "broad spectrum" and "residual" in the first sentence.

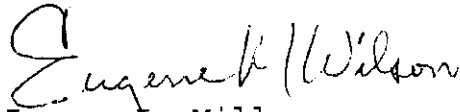
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7. At the next printing of the container label incorporate the use-patterns that are on all supplemental labeling of this pesticide product into a "primary" label to be used by this Agency for administrative purpose.
8. Submit one (1) copy of the final printed labeling before you release this product for shipment under the subject labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA, section 6(e). Your release for shipment of this product under this labeling constitutes acceptance of these conditions.

A stamped copy of the proposed label is enclosed for your records.

Sincerely yours,


for Joanne A. Miller
Product Manager (23)
Herbicide Branch
Registration Division (7505C)

Enclosure



DuPont™ Krenite® S

brush control agent

Water Soluble Liquid

Contains 4 Lbs. Active Ingredient Per Gallon

Active Ingredient	By Weight
Ammonium salt of fosamine [ethyl hydrogen (aminocarbonyl) phosphonate]	41.5%
Inert Ingredients	58.5%
TOTAL	100%

EPA Reg. No. 352-395

**ACCEPTED
with COMMENTS
In EPA Letter Dated
MAR 14 2003**

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
352-395**

KEEP OUT OF REACH OF CHILDREN CAUTION FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for medical emergencies involving this product.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Causes (moderate) eye injury (irritation). Avoid contact with eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT Applicators and other handlers must wear:

- Long-sleeve shirt and long pants.
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

GENERAL INFORMATION

DuPont™ KRENITE® S brush control agent is a water soluble liquid to be diluted with water and applied as a foliar spray for control and/or suppression of many woody species.

KRENITE® S is recommended for use on noncropland, including highway rights-of-way, industrial sites, railroad rights-of-way, storage areas, utility and pipeline rights-of-way.

It is permissible to apply to floodplains where surface water is not present, terrestrial areas of deltas and low lying areas where water is drained but may be isolated in pockets due to uneven or unlevel conditions.

KRENITE® S is non-flammable and non-volatile.

ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

A KRENITE® S spray directed to only part of susceptible brush species will provide control of the portion sprayed, resulting in a trimming effect. Treatment with KRENITE® S generally does not immediately affect deciduous woody plants; they retain normal foliage for the remainder of the growing season. Treated susceptible plants do not produce foliage or grow the following spring. Coniferous species treated with KRENITE® S generally display visible symptoms following application.

Effectiveness may be reduced if, following treatment, rainfall occurs on the same day.

RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Do not let weed escapes go to seed. If applicable, see Weeds Controlled section of label for additional information on managing herbicide resistant weed biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

INTEGRATED PEST MANAGEMENT

DuPont recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program which can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

KRENITE® S should be used only in accordance with recommendations on this label or in supplemental DuPont publications.

Do not apply this product through any type of irrigation system.

Do not use on food or feed crops.

AGRICULTURAL USES

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Shoe plus socks.

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TEMPERATE WOODY CROPS

PINE PLANTATIONS - SITE PREPARATION

DuPont™ KRENITE® S is recommended for the post-harvest (pre-plant) control of natural pines (wildings) and hardwoods to aid site preparation for southern pines and/or genetically improved pines.

APPLICATION INFORMATION

Apply as a foliar spray from mid-summer to the period when the target pests begin defoliation in late summer or fall.

Applications of KRENITE® S may be made by ground or air (helicopter only) equipment. Use sufficient water to ensure complete coverage of the vegetation, generally 20 to 50 gallons per acre by ground and 10 to 15 gallons per acre by air.

Use a non-ionic surfactant at a minimum rate of 16 fluid ounces per acre or the manufacturer's recommended rate, whichever is greater.

USE RATES

Apply 2 to 4 quarts per acre for the control of residual pine seedlings and saplings when the treated area can be burned following application to augment control. Apply 4 to 6 quarts per acre to control residual seedlings and saplings when it is not feasible to use prescribed fire on the treated site.

For broad spectrum control of residual loblolly pine and hardwoods tank mix KRENITE® S with "Arsenal" Applicators Concentrate. Apply 2 to 6 quarts per acre of KRENITE® S with 8 to 20 fluid ounces per acre of "Arsenal" Applicators Concentrate. The tank mix is recommended for the control of Ash, Blackberry, Black gum, Black locust, Box elder, Cherry, Dogwood, Elms (winged, slippery), Oaks (red, white), Red maple, Sassafras, and Sourwood. The tank mix is also recommended for the suppression of American beautyberry (French mulberry), Baccharis (Groundsel tree), Vaccinium (Blueberry) species, Waxmyrtle (Bayberry), and Wild grape.

When using the KRENITE® S plus "Arsenal" Applicators Concentrate tank mix read and follow the directions which appear on the container labels. Use the most restrictive use directions and precautions from both labels.

NON-AGRICULTURAL USES

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter or allow entry into treated areas until sprays have dried to perform hand tasks.

APPLICATION INFORMATION

NONCROPLAND, INDUSTRIAL SITES

Application Timing

Make a foliar application of the recommended rate of KRENITE® S during the period from full leaf expansion in the spring until the development of full fall coloration on deciduous species to be controlled. Coniferous species may be treated at anytime during the growing season.

Species Controlled

KRENITE® S effectively controls or suppresses the following plants when applied at the use rates shown.

1 1/2 to 6 gal KRENITE® S per acre

Bigleaf maple**	Red alder
Birch	Red maple**
Blackberry	Red oak
Black cherry**	Salmonberry
Blackgum	Sassafras**
Black locust	Sourwood**
Bracken (fern)	Sumac
Chinese tallow	Sweetgum
Chokecherry**	Thimbleberry
Elm**	Tuliptree (yellow poplar)**
Hawthorn**	Vine maple
Hickory**	Virginia pine
Leafy spurge***	Water oak
Loblolly pine	White ash
Persimmon**	White oak
Pin cherry	Willow**
Quaking aspen	

2 to 6 gal KRENITE® S per acre

American elder	Slippery elm
Basswood**	Sycamore
Eastern cottonwood	Tree-of-heaven
Eastern white pine	Wild grape
Field bindweed***	Wild plum
Multiflora rose	Winged elm**

** Difficult to control—Partial control and growth suppression.

*** Make applications after plants begin to bloom.

SPRAY EQUIPMENT

KRENITE® S may be applied using high volume or low volume ground sprayers as well as aircraft (helicopter only).

Application equipment should be properly calibrated before making applications of KRENITE® S.

HIGH VOLUME GROUND APPLICATION

Prepare a spray solution using 1 1/2 to 3 gallons of KRENITE® S per 100 gallons of water. Apply a quantity of spray solution which will thoroughly and uniformly cover the foliage. Rate and volume per acre will depend on plant species, height and density of growth as well as the type of application equipment used. On tall or dense stands of brush it may be necessary to spray from opposite sides in order to obtain thorough coverage of the foliage. Use the higher rates on stands where difficult to control species are dominant.

Do not apply more than 6 gallons of KRENITE® S per acre per year.

LOW VOLUME GROUND APPLICATION

Prepare a spray solution using 1 1/2 to 3 gallons of DuPont™ KRENITE® S per 10 gallons of water. Apply a quantity of spray solution using equipment that will deliver small spray droplets ensuring uniform coverage of the foliage. Rate and volume per acre will depend on plant species, height and density of growth as well as the type of application equipment used. Use the higher concentrations on stands where difficult to control species are dominant.

Do not apply more than 6 gallons of KRENITE® S per acre per year.

AERIAL APPLICATION

Prepare a spray solution using 1 1/2 to 3 gallons of KRENITE® S in 10 to 40 gallons of water. Use sufficient spray solution to uniformly and thoroughly cover the foliage. Total rate and volume per acre will depend on plant species, height and density of growth. Use the higher concentrations on stands in which difficult to control species are predominant.

Do not apply more than 3 gallons of KRENITE® S per acre when using aerial equipment.

SIDE TRIMMING

For control of only a portion of a plant, direct the spray solution to thoroughly cover only the portion of the plant to be controlled. Application methods described above may be used for side trimming.

Do not apply more than 6 gallons of KRENITE® S per acre when side trimming.

SPRAY ADJUVANTS

To enhance the activity of the KRENITE® S treatment, the addition of penetrating type oil-based surfactant may be added as the last ingredient. The oil should be mixed in the spray solution at a minimum concentration of 1/4% by volume (1 quart per 100 gallons) or at the manufacturer's recommended dosage.

If foaming is a problem during mixing, an anti-foam agent may be added.

MIXING INSTRUCTIONS

1. Fill spray tank 1/2 full of water.
2. With the agitator running, add the desired amount of KRENITE® S.
3. If using a tank mix partner, add the recommended amount. Read and follow the cautionary statements and other information appearing on the product container label of the selected tank mix partner.
4. Add spray adjuvants if any are to be used.
5. Add the remaining water.
6. Agitate the spray solution thoroughly.

After KRENITE® S has been thoroughly mixed in the spray tank agitation of the spray solution is not required.

USE PRECAUTIONS

- Cutting of treated stems of brush before they are completely dead may result in sprouting.
- Do not use for the control of woody plants on lawns, walks, driveways, tennis courts or similar areas.
- Do not graze livestock or cut or feed forage or hay from treated areas for 1 year after application.
- Drift or spray mist contact with desirable trees, shrubs, or other plants may result in injury.
- Not registered for sale or use in California or Arizona.

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ADDITIONAL USE INFORMATION

SPRAYER CLEAN UP

Thoroughly clean all mixing and spray equipment immediately following applications of KRENITE® S. Flush tank, pump, hoses and boom with several changes of water after removing the nozzle tips and screens (clean these parts separately).

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making applications.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150-200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity and Temperature Inversions sections of this label.

Controlling Droplet Size—General Techniques

- Volume -Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure -Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER -CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type -Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine

drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

STORAGE AND DISPOSAL

STORAGE: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

PRODUCT DISPOSAL: Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

NOTICE TO BUYER: Purchase of this material does not confer any rights under patents of countries outside of the United States.

The DuPont Oval Logo, DuPont™ and KRENITE® are trademarks or registered trademarks of E. I. duPont de Nemours and Company

"Arsenal" is a trademark of BASF Specialty Products

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LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read This Limitation of Warranty and Liability Before Buying or Using This Product. If the Terms Are Not Acceptable, Return the Product at Once, Unopened, and the Purchase Price Will Be Refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product; crop injury, or; injury to non-target crops or plants.

DuPont does not agree to be an insurer of these risks. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT, OR AT THE ELECTION OF DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

For product information call: 1-888-6-DUPONT

Internet address: www.dupont.com/ag/us

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