

Octane® 2% SC

Herbicide

SPECIMEN



A NONSELECTIVE CONTACT HERBICIDE FOR BROADLEAF WEED CONTROL FOR USE IN NURSERIES AND ORNAMENTAL PLANTINGS; SODFARMS; CHRISTMAS TREES; AND ESTABLISHED ORNAMENTAL TURF

Active Ingredient

Pyraflufen ethyl [ethyl 2-chloro-5-(4-chloro-5-difluoromethoxy-1-methyl-1H-pyrazol-3-yl)-4-fluorophenoxyacetate]..... 2.0%

Other Ingredients..... 98.0%

TOTAL..... 100.0%

Contains 0.177 lb. pyraflufen ethyl per gallon (20 grams per liter)

Keep Out of Reach of Children

CAUTION / PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

Refer to the inside of label booklet for additional precautionary information and Directions for Use including Storage and Disposal.

NOTICE: Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies* inside label booklet.

SHAKE WELL BEFORE USING

Manufactured for: SePRO Corporation
11550 North Meridian Street, Suite 600
Carmel, IN 46032, U.S.A.

EPA Reg. No. 71711-25-67690
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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

KEEP OUT OF REACH OF CHILDREN

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves (Selection Category A).

FIRST AID

If on skin or clothing	<ul style="list-style-type: none">Take off contaminated clothing.Rinse skin immediately with plenty of water for 15 - 20 minutes.Call a poison control center or doctor for treatment advice.
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Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC 1-800-535-5053**.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants;
- Shoes plus socks;
- Chemical-resistant gloves.

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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic invertebrates. This product may contaminate water through drift of spray in wind or via runoff events. Use care when applying in areas adjacent to any body of water. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. Do not apply when weather conditions favor drift from treated areas.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

SHAKE WELL BEFORE USING.

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.

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;
- Chemical resistant gloves;
- Shoes plus socks.

NONAGRICULTURAL 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, or greenhouses. For other uses, including interiorscapes and other nonagricultural uses, do not enter treated areas without protective clothing until sprays have dried.

USE INFORMATION

OCTANE 2% SC is designed for use as a contact herbicide for broadleaf weed control.

For best results, use OCTANE 2% SC for control of annual or perennial herbaceous broadleaf weeds less than 4 inches in height, or rosettes less than 3 inches in diameter. Use the higher rates and spray volumes for control of larger weeds; control may be reduced with weeds larger than 4 inches.

OCTANE 2% SC must be tank mixed with another foliar active broadleaf herbicide for complete control of most broadleaf weeds.

Use an approved agriculture buffering agent, buffering to less than pH 7.5, if using OCTANE 2% SC in a water source greater than or equal to pH 7.5. Always buffer the water source BEFORE adding OCTANE 2% SC to the spray tank.

OCTANE 2% SC is a contact herbicide and defoliant and requires thorough coverage for complete broadleaf weed control and defoliation/desiccation.

Apply OCTANE 2% SC in a minimum of 5 gallons spray solution per acre by air or 10 gallons spray solution per acre by ground unless otherwise specified.

Do not apply OCTANE 2% SC through any type of irrigation system.

OCTANE 2% SC is rainfast within one hour after application.

ROTATIONAL CROP RESTRICTIONS

Crop / Crop Group	Rotational / Plantback Intervals
Com Cotton Grapes Olives Pome Fruit Crop Group 11 Pomegranates Potatoes Soybeans Stone Fruit Crop Group 12 Tree Nuts Crop Group 14 Wheat, Triticale	0 days following application
Bulb Vegetables Crop Group 3 Cereal Grains Crop Group 15 (except corn, wheat, and triticale - see 0-day plantback interval above) Cole Crops Crop Group 5 Cucurbits Crop Group 9 Fruiting Vegetables Crop Group 8 Leafy Vegetables Crop Group 4 Legumes Crop Group 6 Oil Seeds Crop Group 20 Root and Tuber Vegetables Crop Group 1 (except potatoes - see 0-day plantback interval above) Sugarcane	1 day following preplant burndown application
For all other rotational crops, do not plant for 30 days following the last application of OCTANE 2% SC.	

WEEDS CONTROLLED

The following broadleaf weed species can be controlled or suppressed up to 4 inches in height or less, or rosettes of 3 inches in diameter or less. Tank mixtures of OCTANE 2% SC with other labeled broadleaf herbicides may be needed for control of some weed species.

Amaranth, Palmer	Eclipta	Milkthistle
Bedstraw	Evening primrose, cutleaf	Morningglory, species
Beggarweed, Florida	Geranium, Carolina	Mustard, wild (suppression)
Beggartick, hairy	Henbit	Nettle, stinging
Bindweed, field	Horsenettle (suppression)	Nightshade, black
Buckwheat, wild	Knotweed, prostrate	Panicum Willowweed
Canola	Kochia	Pigweed, redroot
Carpetweed	Ladysthumb	Pigweed, smooth
Celery, wild	Lambsquarters, common	Pineapple weed
Chickweed	Lettuce, prickly	Poinsettia, wild
Chickweed, common	Mallow, common	Poison-ivy
Clover, white	Marestail (suppression)	Prickly sida (Teaweed)
Cocklebur	Smartweed, Pennsylvania	Purslane, common
Dandelion, common	Smellmelon	Velvetleaf
Dock, curly	Sowthistle, annual	Virginia-creeper
Dollarweed	Spurge, leafy	Volunteer cotton
Radish, wild	Sunflower, common	(Conventional, GMO varieties)
Ragweed, common	Thistle, Canada	Volunteer potato
Ragweed, giant	Thistle, Russian	Waterhemp, tall
Redmaid	Toadflax, Dalmatian	Waterhemp, common
Rocket, London		Western tansymustard
Sesbania, hemp		
Shepherd's-purse		
Sicklepod (suppression)		

TANK MIXTURES

OCTANE 2% SC may be applied as a tank mix or in sequential application with other harvest aid, herbicide, fungicide, or insecticide products. Weather, crop conditions, or the presence of certain weeds, crop damaging insects, or diseases will indicate the inclusion of other pesticides in the application.

NOTE: It is recommended that the compatibility of OCTANE 2% SC in any tank mix combination be tested before use. To determine the physical compatibility with other products, use a jar test, as described below:

Using a quart jar, add the proportionate amounts of the products to 1 qt. of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank.

Read and follow all label directions for each tank mix product. Always use in accordance with the most restrictive of label precautions and limitations.

MIXING DIRECTIONS

Shake well before using. Add ½ to ¾ of the required amount of water to the spray tank. Start agitation. Add the required amount of OCTANE 2% SC and the remaining amount of water. Mix only as much spray solution as can be sprayed within four hours. Storage and use of the previous day's spray mix may result in reduced activity.

Use an approved agricultural buffering agent buffering to pH 7.5 or less if using OCTANE 2% SC in a water source of ≥ pH 7.5. Always buffer the water source BEFORE adding OCTANE 2% SC to the spray tank.

SPRAY DRIFT

Avoid spray drift to all other crops and non-target areas. Do not apply when weather conditions may cause drift. Do not allow this product to drift onto non-target areas. Drift may result in illegal residues or injury to adjacent crops and vegetation in the form of leaf yellowing and defoliation. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet size will also reduce spray drift.

Avoiding spray drift at the application site is the responsibility of the applicator.

The interaction of equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. Droplet size, boom height, and wind speed are the primary factors determining drift. The specific application conditions required for the use of this product are described below.

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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*).

Controlling Droplet Size

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Maintenance of Nozzles** – Periodic inspection and subsequent replacement of nozzles to ensure proper chemical application is recommended.

Boom Length

For some use patterns, reducing the effective boom length to less than ¾ of the fixed wingspan or 90% of rotor blade diameter may further reduce drift without reducing swath width.

Application Height

Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

Wind

Drift potential is lowest between wind speeds of 2 – 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. Application should be avoided below two (2) mph due to variable wind direction and high inversion potential. **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 low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light and variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

EQUIPMENT CLEANING

Do not allow the spray solution to dry in the application equipment. After application and before using the sprayer equipment for any other applications, the sprayer must be thoroughly cleaned. Applicators must ensure proper equipment clean-out for any other products mixed with OCTANE 2% SC as provided on the other product label(s). Immediately following application, clean all equipment thoroughly with detergent or a spray tank cleaner and water as described below. Should residues of OCTANE 2% SC remain in inadequately cleaned equipment, they may be released in subsequent applications and cause injury to crops.

1. Drain sprayer tank, hoses, and spray boom and thoroughly rinse with clean water the inside of the spray tank, sprayer hoses, boom, and nozzles to remove any sediment or residues.
2. Fill the tank 1/2 full with clean water, add the appropriate detergent (follow manufacturer's directions for use). Fill tank to capacity and operate the sprayer with agitation for 15 minutes to flush hoses, boom, and nozzles.
3. Drain the sprayer tank, lines, and booms. Rinse the tank with clean water and flush through the hoses, boom, and nozzles. Remove and clean spray nozzles, tips, and screens.
4. Dispose of all cleaning solutions, rinsate, and washwaters in accordance with Federal, state, and local regulations.

APPLICATION AND DOSAGE

Nurseries and Ornamental Plantings; Sodfarms; Christmas Trees; Established Ornamental Turf

Turfgrass Tolerance

Established turfgrasses tolerant to application of OCTANE 2% SC at labeled rates are listed below. For turfgrass species not listed on this label, the user should apply OCTANE 2% SC to a small test area to assure tolerance. A slight transitory yellowing or

discoloration may occur on some sensitive turfgrass species under stress 3 to 5 days following application of OCTANE 2% SC at labeled rates. Recovery is typically 4 to 7 days from application.

Cool Season Turfgrasses (creeping bentgrass, Kentucky bluegrass, rough bluegrass, tall fescue, perennial ryegrass). Cool season grasses, both newly seeded and established, are generally tolerant to applications of OCTANE 2% SC at labeled rates. To evaluate tolerance of certain species, apply to a small test area before treating large areas to assure tolerance. Be aware and observe all label restrictions regarding turfgrass tolerance when OCTANE 2% SC is tank mixed with another product.

Warm Season Turfgrasses (common and hybrid bermudagrass, centipedegrass, St. Augustinegrass, zoysiagrass). Warm season turfgrasses listed above are generally tolerant to applications of OCTANE 2% SC at labeled rates. Centipedegrass may exhibit a slight yellowing 3 to 7 days after application, however complete recovery is expected. To evaluate tolerance of certain species, apply to a small test area before treating large areas to assure tolerance. Be aware and observe all label restrictions regarding turfgrass tolerance when OCTANE 2% SC is tank mixed with another product.

Newly Seeded, Sodded, or Sprigged Turfgrass

OCTANE 2% SC may be applied to newly seeded, sodded, or sprigged turfgrass that is established and not subject to impending stress due to moisture, temperature, or other cultural practices. Areas treated with OCTANE 2% SC may be seeded or overseeded one day following application.

Dormant Turfgrass

Applications of OCTANE 2% SC to dormant warm season turfgrasses are permitted. Avoid applications when warm season turfgrasses are transitioning into or out of dormancy.

For applications to ornamental turf and plantings, do not allow people (other than the applicator) or pets on treatment area during application and until sprays have dried (refer to *Nonagricultural Use Requirements* box). Apply OCTANE 2% SC at rates specified in the dosage table below for control of broadleaf weeds. OCTANE 2% SC is a broadleaf contact herbicide. OCTANE 2% SC may be tank mixed with other registered grass herbicides for control of grassy weeds. **Avoid contact with desirable vegetation.**

Spray Volume

OCTANE 2% SC is a contact herbicide that causes herbicidal symptoms only to plant parts that come into contact with spray applications. Therefore, proper spray volume and uniform coverage are important to maximize efficacy of OCTANE 2% SC. Uniform sprays should be applied at 20 to 200 gallons/A (0.5 to 4.5 gallons per 1000 sq. ft). Higher spray volumes should be used to target high weed populations and/or weeds contained in dense turfgrass canopies.

Use of Adjuvants

Addition of surfactants (spreaders/stickers) to the spray solution will improve efficacy and contact activity of OCTANE 2% SC. Follow manufacturer's recommended use rates for specific sites.

USE	RATE / ACRE	USE RESTRICTIONS AND COMMENTS
Nursery and ornamental plantings Sodfarms Christmas trees Established ornamental turf	<p>When NOT tank mixing with other herbicides: Apply OCTANE 2% SC at rates of 1.0 to 4.0 fluid ounces per acre in 20 to 40 GPA for control of seedling, non-mature winter and summer annual weeds and/or for temporary burndown of weeds listed in <i>Weeds Controlled</i>. Tank mixes, including other broadleaf herbicides, with OCTANE 2% SC may be needed for control of larger winter and summer annual weeds.</p>	<ul style="list-style-type: none"> • Do not make more than 3 applications or exceed 13.6 fl oz/A per year using ground equipment. • Allow a minimum of 30 days between applications. • Do not apply by air. • Do not apply when environmental conditions favor spray drift or poor spray coverage. • Avoid spray drift onto non-target susceptible plants such as vegetables, flowers, ornamentals, trees, shrubs, and other desirable plants. • Do not apply to lawns or turf where clovers and carpetgrass are desirable.
	<p>When tank mixing with other herbicides: Apply OCTANE 2% SC at rates of 0.7 to 1.5 fluid ounces per acre in tank mix combinations with herbicides registered for use such as amines, esters, and salts of 2,4-D, chloroprop, dicamba, mecoprop, MCPA, triclopyr, fluroxypyr, and various combination of these products for control of annual weeds and perennial weeds listed in <i>Weeds Controlled</i>. Residual, long-term control of the target weeds is as defined by the labeling of the companion product. For tank mixing with herbicides, follow the tank mix directions.</p>	

Backpack Sprayer Dosage Chart

For use in backpack sprayers having a tank capacity of 3 to 5 gallons, accurate calibration and measurement of the appropriate amount of product is important to deliver the desired rate of OCTANE 2% SC. Use the chart below to determine the quantity of OCTANE 2% SC to be added to a backpack sprayer having a capacity of 3 to 5 gallons to equal a 1.5 fl oz/A rate.

BACKPACK TANK CAPACITY (GALLONS)	SPRAY VOLUME (GALLONS/A)	FLUID OZ PRODUCT PER TANK FOR 1.5 FL OZ/A	ML PRODUCT PER TANK FOR 1.5 FL OZ/A
3	20	0.23	6.6
	30	0.15	4.4
	40	0.11	3.3
4	20	0.30	8.9
	30	0.20	5.9
	40	0.15	4.4
5	20	0.38	11.1
	30	0.25	7.4
	40	0.19	5.5

For smaller volume sprayers less than three (3) gallons in size, measure 0.03 to 0.07 fl. oz. (1 to 2.1 ml) of Octane 2% SC per one (1) gallon of water when tank mixing with other herbicides to equal a 1.5 fl. oz./A rate. For specific measurements based on spray volume (gallons/A), see the table below.

SPRAY VOLUME (GALLONS/A)	FLUID OZ PRODUCT PER GALLON WATER FOR 1.5 FL. OZ/A	ML PRODUCT PER GALLON WATER FOR 1.5 FL. OZ/A
20	0.07	2.1
30	0.05	1.4
40	0.03	1.0

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage: Store in a cool place.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling: (Nonrefillable container equal to or less than 5 gallons) DO NOT reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State or local authorities, by burning. If burned, stay out of smoke.

WARRANTY DISCLAIMER

SePRO Corporation warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. SEPRO CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO Corporation as the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories) shall be limited to, at SePRO Corporation's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, SePRO Corporation shall not be liable for losses or damages resulting from handling or use of this product unless SePRO Corporation is promptly notified of such losses or damages in writing. To the extent consistent with applicable law, in no case shall SePRO Corporation be liable for consequential or incidental damages or losses.

The terms of the *Warranty Disclaimer* above and this *Limitation of Remedies* cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO Corporation or the seller is authorized to vary or exceed the terms of the *Warranty Disclaimer* or *Limitations of Remedies* in any manner.

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