

# Solace<sup>TM</sup>

TURF GROWTH CONTROL

## Specimen Label

A microemulsion concentrate used to manage growth and improve quality and stress tolerance of turf edging and warm- and cool-season turfgrasses.

**ACTIVE INGREDIENT:** ..... % by weight  
Trinexapac-ethyl: ..... 11.3%  
**OTHER INGREDIENTS:** ..... 88.7%  
**TOTAL:** ..... 100.0%

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**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

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Distributed by Regal Chemical Company / P.O. Box 900 / Alpharetta, GA 30009



FIRST AID	
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b> <b>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact PROSAR (800) 308-5391 for emergency medical treatment information.</b>	
<b>NOTE TO PHYSICIAN</b> <b>If a large amount has been ingested, lavage stomach. An aqueous suspension of activated charcoal can be given to absorb remaining toxicant. Treat symptomatically.</b>	

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

**Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing.**

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category C on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (such as nitrile, butyl, neoprene, or barrier laminate)
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

**Engineering Control Statements**

When handlers use closed systems or enclosed cabs 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.

USER SAFETY RECOMMENDATIONS
<b>User Should:</b> <ul style="list-style-type: none"> <li>Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</li> <li>Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li> </ul>

**ENVIRONMENTAL HAZARDS**

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 wash water. 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.

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.

The restricted-entry interval (REI) for this product is 0 days.

**Do not enter treated areas without footwear until sprays have dried.**

**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 treated areas without footwear until sprays have dried.**

Observe all precautions and limitations on this label and on the labels of each product used in tank mixture with this product.

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN UNEVEN GROWTH REDUCTION OR SEVERELY STUNTED TURF.**

**GENERAL INFORMATION**

Solace is a plant growth regulator and is an odorless micro emulsion concentrate (MEC). Solace mixes completely with water and may be tank mixed with many commonly used pesticides and liquid fertilizers.

Solace is effective only by absorption through the grass foliage and not by plant uptake of the product through the soil. Within one hour after application, Solace will not wash off the grass foliage. A number of factors affect the activity and performance of Solace when used for growth management of turfgrasses including, but not limited to, the following:

- environmental conditions
- turfgrass management and cultural practices that affect grass growth and vigor
- level of plant fertility
- availability of moisture
- plant vigor
- state of grass growth

Watering-in is not necessary for activation of Solace.

**TURFGRASS:** Solace reduces the growth of warm- and cool-season turfgrasses. When used according to directions for turf growth management, Solace reduces the frequency of mowing and the amount of grass clippings generated by mowing. Solace applications may also increase the color, quality and density of turf. Solace can be applied to the following sites that have well-maintained, quality turfgrass areas:

- lawns (residential and commercial)
- golf courses

- sod farms
- sports fields, cemeteries, and similar areas
- difficult-to-mow areas

Solace minimizes the need for edging of turfgrass along sidewalks, curbs, parking lots, driveways, flower beds, fences and around posts, storage sheds, and trees.

## USE DIRECTIONS FOR APPLICATIONS TO TURFGRASS MOWING

For greater suppression with Solace, maintain turfgrass at lower mowing heights. Note that the rates given in the Application Rate Tables are for turf at typical mowing heights, therefore the application rates should be adjusted based on the grass height at application. Turfgrass injury can be minimized by using one of the following options:

1. mow 4 hours after the application of Solace,
- OR
2. mow 1 hour before application of Solace

## EQUIPMENT

Solace may be applied using one of the following types of spray equipment:

- backpack sprayers
- hand sprayers
- boom sprayers
- spray gun application devices

Use only spray equipment that have been thoroughly cleaned before use. Ensure that the sprayer will deliver an accurate and uniform spray by calibration of the equipment. After use, clean the sprayer with clean water and dispose of rinsate according to label directions.

## MIXING INSTRUCTIONS

1. Add Solace to a sufficient amount of water (ex., 0.5 to 4.0 gallons of water per 1,000 sq. ft.)
2. Mix only the volume of spray mixture required for the square footage to be treated
3. Ensure adequate agitation during application
4. When Solace is used as a tank mix with other products, agitation is required.
5. Apply Solace in a uniform manner to ensure thorough coverage of the crop.

For tank mixtures, use only if the mixing partner is registered for this use. Do not mix Solace with any product which prohibits such mixing. Do not exceed any label application rate and follow the most restrictive label precautions and limitations. Refer to the tank mix partner label(s) for further information.

### Backpack and Hand Sprayers (0.5 to 4.0 gallon capacities)

**Solace Alone:** Fill the spray tank with total amount of water required. Add the appropriate amount of Solace. Close the spray tank, and agitate to ensure a uniform solution. Make spray applications to turfgrass.

### Boom and Hand Gun Sprayers

**Solace Alone:** Fill the spray tank with total amount of water required. Agitate the water while adding Solace.

**Solace Plus Tank Mixtures:** Before mixing Solace with other components, determine the compatibility of the tank mix using the **TANK MIX COMPATIBILITY TEST** below. Once the compatibility of the mixture is assured, add the products (such as carrier or other

pesticide products) to the spray tank in the order noted below:

1. Add 1/2 of the required amount of water to the spray tank.
2. Keep the tank mix agitated to ensure formation of a uniform suspension.
3. Add any products that are packaged in water-soluble pouches first. Keep the tank mix agitated to ensure that the water soluble bags dissolve and the contents dispersed in the tank mix. Continue agitation and then add water-dispersible granules (WG), followed by wettable powders (WP). Before adding other products, ensure complete dispersal of the solid products.
4. Add emulsifiable concentrates (EC).
5. Add flowable liquids (FL) or suspension concentrates (SC).
6. Add Solace.
7. Add spray adjuvant and spray markers. Use surfactants approved for application to turf. Check surfactant label before use.
8. Add the remainder of the water.
9. Agitate tank mix combinations. Do not leave mixtures sit in the spray tank without agitation. Only prepare the amount of spray mix required for use on one day and apply it all that day.

## TANK MIX COMPATIBILITY TEST

Add relative proportionate amounts of Solace, other products to be used, and the water in a clear glass quart jar with a lid. Close the lid and invert the jar several times and observe the mixture for approximately 30 minutes. **The mixture is not compatible if the following is observed:** formation of balls, flakes, sludge, gels, oily films or layers; or precipitates.

## APPLICATION NEAR AND AROUND MONUMENTS AND HARDSCAPE MATERIALS

Brass, bronze, concrete, marble, granite, or other types of stone are not stained by Solace when applied at normal dilution rates. To ensure Solace will not stain other materials, test Solace on a small scale basis before using on a larger scale.

## PRE-STRESS CONDITIONING OF TURFGRASS

To delay the onset of stress, improve turf survival under stress, and enhance the turf's recovery from stress, make multiple applications of Solace. Normal turf cultural practices such as fertilization, irrigation, drainage, mowing height, etc. should be maintained.

Solace can be applied to healthy, actively growing turf before the onset of stress and may continue to be applied throughout the growing season as long as the turf remains healthy. **Do not apply more than 7.0 fl. oz. per 1,000 sq. ft. per year.**

Application of Solace may produce turfgrass root-mass which is often greater in treated turf than in similar, untreated turf. This increase in turfgrass root-mass is a result of the reduction in turf top growth, thereby redirecting the energy to below-ground plant parts and increasing production of the root and rhizome system.

Enhanced fungicide performance has been demonstrated in research trials when monthly applications of Solace at the label rate, or biweekly applications at 1/2 the label rate, were shown to strengthen the turfgrass and to help it resist disease. Since mowing is less frequent and removal of leaf material is reduced, contact and systemic fungicide products remain more effective in or on the turf longer.

Multiple applications of Solace will result in smaller, more compact

turfgrass and reduced leaf area. This causes a reduction in transpiration and water use, and improves drought tolerance of the turfgrass. Loss of moisture from soil evaporation is reduced by the increased turf density allowing soil moisture to be available due to increased root depth and mass. Solace also may increase carbohydrate levels in turfgrass; increased carbohydrate levels have been shown to enhance heat and cold tolerance of turfgrass.

### **POA ANNUA CONVERSION/RENOVATION**

When overseeding or renovating existing turf infested with strands of *Poa annua*, Solace use allows better germination and seedling growth of the more desirable turf, results in fewer clippings and thus reduces maintenance traffic on new seedlings. Solace is foliarly-absorbed therefore does not affect seed germination. Solace should be applied 1 to 5 days before seeding, and before verticutting, scalping, spiking, or other similar operations.

Temporary initial discoloration of turfgrass infested with *Poa annua* is possible with aggressive application rates of Solace. In the subsequent spring season, apply Solace at the higher rate for the turf type and setting listed in the Application Rate Tables. As described above, the success of this treatment will also depend on other factors such as growing conditions, fertilization, rainfall, and other agronomic and environmental conditions.

### **BERMUDAGRASS OVERSEEDING**

In addition to normal turfgrass cultural practices, Solace applications to Bermudagrass enhance the establishment of cool-season turfgrasses and help ensure new seedling vigor and growth, will result in fewer clippings, and less maintenance traffic on new seedlings. Since Solace is foliarly absorbed, germination and seedling growth is unaffected by Solace.

Apply Solace 1 to 5 days before seeding, and before verticutting, scalping, spiking, or other similar operations to the Bermudagrass.

Aggressive application rates of Solace may cause temporary initial discoloration of turfgrass. To avoid discoloration, use the normal seeding rates for your area and turf setting (lawn, fairway, etc.). The success of overseeding will depend on a number of factors including growing conditions, fertilization, rainfall, and other agronomic and environmental conditions. See the Application Rate Tables for maintenance application rates.

### **APPLICATIONS WITH TURF MARKING PAINT**

The duration of marking paint on turf can be extended when Solace is applied before or with the marking agents. When used with latex-based marking agents, mix Solace with water before adding the marking agent. For further directions, read the product label for the marking agent and the Solace + Tank Mixtures section of this label.

Use Rate:

- 1 ounce of Solace in 1 gallon of marking paint treats approximately 1,000 sq. ft. of line surface area.

### **PLANT TOLERANCE**

The grasses listed on this label have been shown to be tolerant of Solace. It is impossible to test every species and cultivars of grasses for tolerance to Solace. Before commercial use, the professional user should determine if Solace can be used safely on grasses not listed in the Application Rate Table by conducting small scale tests. The lower recommended rate for turf setting (lawn, fairway, etc.) should be tested and evaluated for phytotoxicity and growth inhibition

prior to use on a large scale.

### **PRECAUTIONS**

- Normal recommended cultural practices (such as irrigation; fertilization; and weed, disease and insect control ) should continue when necessary in areas treated with Solace. to ensure quality turf.
- Because some herbicides can injure turf, tank mixes with Solace should be tested on a small scale before widespread use. See the directions for testing in the TANK MIX COMPATIBILITY TEST section above.
- Solace may cause temporary yellowing of turfgrass which usually disappears about one week after application. If readily available nitrogen (0.2-0.5 lb. of actual nitrogen per 1,000 sq. ft.) is applied to turfgrass, the yellowing is minimized and the green color is enhanced. Alternatively, recommended rates of iron per 1000 sq ft. can also be used.
- Regulation of full growth by Solace usually begins at 3-5 days after application.
- If using Solace in a tank mixture observe all direction for use, sites, use rate dilution ratios, precautions and limitations, which appear on the tank-mix product's label. Do not exceed any label use rate and follow the most restrictive label precautions and limitations. This product should not be applied with any product which prohibits such mixing.
- Do not apply Solace through any type of irrigation system.
- Do not graze areas or feed turf grass clippings to livestock.

### **APPLICATION RATES AND TIMING**

Apply Solace to actively-growing turf. Use the lower rate of Solace in situations when turf is going dormant due to high or low temperatures, or to lack of moisture.

A repeat application(s) of Solace may be made as soon as the turf resumes growth or if more suppression is desired. Do not apply more than 7.0 fl. oz. per 1,000 sq. ft. per year.

The Application Rate Tables provides use rates that lead to approximately 50% growth inhibition over a 4 week period and produce little or no discoloration of turf when turf is growing under favorable conditions.

High fertilization and spring flushes may cause excessive turf growth which may require higher rates of Solace. Under these conditions, increase the Solace rate up to 50% to ensure an adequate length of control.

A maximum of twice the recommended Solace rate from the Application Rate Tables may be applied in order to ensure extended growth suppression of up to 8 weeks and when temporary discoloration can be tolerated,

A reduction of up to 50% of the Solace use rates may be needed for turfgrass grown under conditions of low fertility, compaction, or other factors which leads to stress of the turf.

**Repeat applications of Solace are permitted during the growing season, but do not exceed a total of 7.0 fl. oz. per 1,000 sq. ft. (305 fl. oz. per acre which is equivalent to 19.0 pts. per acre) per year.**

## APPLICATION RATE TABLE FOR USE OF Solace ON COOL SEASON GRASSES<sup>a</sup>

Turf Type	Residential and Commercial Turf <sup>b</sup>	Golf Course Fairways (Cut at 0.5" or less)	Golf Course Greens	Edging/Banding <sup>c</sup>
	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)
Bentgrass	33 (0.75)	11 (0.25)	6 (0.125)	44 (1.0)
Fescue, Red	33 (0.75)			44 (1.0)
Fescue, Tall (KY-31)	44 (1.0)			44 (1.0)
Fescue, Tall (Turf Types)	33 (0.75)			44 (1.0)
Kentucky Bluegrass	26 (0.60)	11 (0.25)		33 (0.75)
Mixture (Bentgrass/ <i>Poa annua</i> )		11 (0.25)	7 (0.125)	
Mixture (K. Bluegrass/ Fescue/ Ryegrass)	33 (0.75)			
Mixture (K. Bluegrass/ Ryegrass/ <i>Poa annua</i> )		22 <sup>d</sup> (0.50)		
Ryegrass, Annual	44 (1.0)			44 (1.0)
Ryegrass, Perennial	44 (1.0)	22 (0.50)		44 (1.0)

## APPLICATION RATE TABLE FOR USE OF Solace ON WARM SEASON GRASSES<sup>a</sup>

Turf Type	Residential and Commercial Turf <sup>b</sup>	Golf Course Fairways (Cut at 0.5" or less)	Golf Course Greens	Edging/Banding <sup>c</sup>
	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)	Fl. Oz./A (Fl. Oz./1,000 sq. ft.)
Bahiagrass	44 (1.0)			44-88 (1-2)
Bermudagrass <sup>e</sup>				
Bermudagrass, Common	33 (0.75)	11 (0.25)		44-88 (1-2)
Bermudagrass, Other Hybrids	11 (0.25)	9 (0.20)		22-33 (0.50-0.75)
Bermudagrass, Tifdwarf	9 (0.20)	9 (0.20)	3 (0.062)	22-33 (0.50-0.75)
Bermudagrass, Tifgreen (328)	11 (0.25)	9 (0.20)	6 (0.125)	33 (0.75)
Bermudagrass, Tifway (419)	16 (0.38)	11 (0.25)		33 (0.75)
Buffalograss	44 (1.0)			44 (1.0)
Carpetgrass	11-18 (0.25-0.40)			22 (0.50)
Centipedegrass	22 (0.50)			44 (1.0)
Kikuyugrass	13-22 (0.30-0.50)	13 (0.30)		44 (1.0)
St. Augustinegrass	4.50-6.50 (0.10-0.15)			18-36 (0.40-0.80)
St. Augustinegrass, Texas Common	4.5 (0.10)			9 (0.20)
Zoysiagrass	11 (0.25)	6 (0.125)		33 (0.33)

### Footnotes for APPLICATION RATE TABLES

- <sup>a</sup> Seedheads: Solace suppresses seedhead formation in hybrid bermudagrass, and partially suppresses seedhead formation in annual bluegrass, bahiagrass, buffalograss, carpetgrass, common bermudagrass, Kentucky bluegrass, and tall fescue at rates equal to or higher than the rates in these tables and only if Solace is applied prior to seedhead formation. Do not apply more than 7.0 fl. oz. per 1,000 sq. ft. per year.
- <sup>b</sup> Residential and Commercial Turf includes sites such as, but not limited to, business sites, cemeteries, golf course rough, home lawns, parks, recreation areas, sod farms, and sports fields.
- <sup>c</sup> Apply Solace along the perimeter of curbs, driveways, fences, lawns, parking lots, pet pens, posts, sidewalks, storage buildings, or other areas. When Solace is applied around flower beds, shrubs, trees, and other border plants or similar

areas, these ornamental plantings will not be injured. Apply Solace in an 8 to 12-inch band using a single nozzle sprayer. The higher concentrations listed reduce the growth of the turfgrass into adjacent areas.

- <sup>d</sup> To prevent yellowing of *Poa annua*, use half this rate and apply more frequently. If temporary discoloration of *Poa annua* in conversion/renovation programs can be tolerated, use twice this application rate.
- <sup>e</sup> To prepare bermudagrass for overseeding: use 0.50 oz. per 1,000 sq. ft. on golf fairways and tees and 0.25 oz. per 1,000 sq. ft. on golf greens.

**RESTRICTIONS: Do not graze livestock on treated areas before 60 days after harvest.  
Do not apply this product through any type of irrigation system.**



## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Do not store below 0°F. If crystals do form, store above 70°F, shaking periodically until crystals are dissolved.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, 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 DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## CONDITIONS OF SALE AND WARRANTY

Upon purchase or use of this product, purchaser and user agree to the following terms:

**Warranty:** Regal Chemical Company (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. No such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. All such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.