



**FOR USE ON GRAPES, FRUIT AND NUT CROPS  
(NURSERY AND ORCHARD TREES)**

ACTIVE INGREDIENT:	_____
S-Abscisic Acid .....	20.0% w/w
OTHER INGREDIENTS .....	80.0% w/w
TOTAL .....	100.0% w/w

ProTone® SG contains a total of 20 g of S-Abscisic Acid (S-ABA) in 100 g of product. S-Abscisic Acid, commonly known as S-ABA, is a growth regulator found in all plants.

EPA Reg. No. 73049-461  
EPA Est. No. 33762-IA-001

List No. 05710

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**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

1.0 FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 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>
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call toll-free 1-800-892-0099 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-847-968-4700.</p>	

This label must be in the possession of the user at the time of pesticide application.

**2.0 PRECAUTIONARY STATEMENTS**

**2.1 Hazards To Humans & Domestic Animals**

**CAUTION**

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**2.2 Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves
- Shoes plus socks
- Protective eyewear

Follow the 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.

**2.3 User Safety Recommendations**

User should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

## 2.4 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 when disposing of equipment washwater or rinsate.

## 3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with the terms of the label. 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 State or Tribal agency responsible for pesticide regulation.

## 4.0 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 4 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:

- Long-sleeved shirt and long pants (or coveralls)
- Chemical resistant gloves (made of any waterproof material)
- Shoes plus socks
- Protective eyewear

## 5.0 GENERAL DIRECTIONS FOR USE ON GRAPES

Use only as directed. Read the label thoroughly and make sure it is understood before making applications.

- Undesired effects can result from any deviations from the label directions in the rates, timings, water volumes, or the adoption of untested spray mixes, when applying *ProTone* SG Plant Growth Regulator Soluble Granule (hereafter referred to as *ProTone* SG).
- To prepare the treatment solution, add the required amount of *ProTone* SG to a spray tank about half-filled with water. Agitate while bringing the total volume of water to the required level. Mix thoroughly with agitation and bypass circulation to completely dissolve the *ProTone* SG, and then add surfactant. Discard any unused treatment solution at the end of each day following local, state or federal law.
- Where recommended, use a non-ionic surfactant at the final adjuvant concentration directed by the adjuvant manufacturer.
- Do not apply *ProTone* SG to plants or fruit under stress (e.g. heat, water, disease, insect, nutrient). Injured or stressed plants or fruit will show a reduced response to *ProTone* SG.
- Do not overhead irrigate treated plants for at least 6 hours following application of *ProTone* SG.
- Do not apply *ProTone* SG if rain is expected within 6 hours of application.

### 5.1 Compatibility With Other Agricultural Products

Compatibility and performance data for *ProTone* SG with other agricultural products is not available.

Do not tank mix *ProTone* SG with compounds containing copper or iron ions. Do not tank mix *ProTone* SG with any product unless compatibility has been verified. If considering tank mixing *ProTone* SG with other products use the following **compatibility jar test** before mixing a whole tank:

Add water from the same water source to a clear glass or plastic jar. Add the pesticides in correct proportions. Mix thoroughly and let stand for a minimum 15 minutes. Separation, gelling, or generation of heat are all signs of incompatibility.

Even if a mix passes the jar test for compatibility, it is imperative to test it on a designated area to evaluate for phytotoxicity or ineffectiveness.

Always read and follow all label directions and precautions of each product. When using combinations of products the most restrictive of label limitations and precautions must be followed. Do not mix with any pesticide that has a prohibition against tank mixing. For further information consult your Valent agricultural specialist (1-800-6-VALENT).

## 5.2 Applications, Rates, and Timings

### ENHANCED COLORATION OF GRAPES:

S-ABA is known to accelerate and enhance the color development of grape berries depending on cultivar, vineyard conditions, and growing region. One or more of the following benefits is often associated with treatment with S-ABA: improved fruit quality as a result of enhanced fruit color, earlier harvest, improved harvest management, and improved pack-out yield.

Crop	Objective/ Benefit	Application Instructions
<b>Grapes</b> (Table Grapes, Juice Grapes, Wine Grapes)	Enhanced coloration of grapes.  Contact Valent for more information.	Apply <i>ProTone</i> SG within the period from 1 week before veraison (50 percent of the target fruit has softened) until anticipated harvest of target fruit. Application timing varies depending on the cultivar, vineyard conditions, and grower objectives.  <b>Spray Applications:</b> Apply 375 - 1,250 grams of <i>ProTone</i> SG (75 - 250 grams of S-ABA) per acre as a spray solution in a sufficient volume to achieve uniform and complete coverage of the grape bunches. In situations where greater color development is desired, use higher rates. Spray volumes ranging from 80 - 200 gal/A have been shown to be effective when applied under slow drying conditions.  <b>Early timing:</b> First application should be made between 1 week before veraison and 3 weeks after veraison. A single application made during this period has been shown to be effective to enhance grape berry color.  <b>Late timing:</b> If additional color development is desired, up to three (3) applications of <i>ProTone</i> SG can be used. Multiple applications are expected to improve color on cultivars for which there is an extended period between veraison and harvest.  Apply to marketable clusters with significant green color. Fruit may need to remain on the vine for 2 to 3 additional weeks for harvestable color to develop. Fruit must be firm at time of application with the potential to remain firm until harvest.
<b>Use of Adjuvants:</b> Use a non-ionic surfactant at the final surfactant concentration directed by the surfactant manufacturer to improve wetting and coverage of grape bunches.		

#### Additional Instructions:

- Optimal *ProTone* SG rates will vary according to the desired color effect, growing conditions and practices, application technique, environmental conditions, variety and cultivar, plant vigor, vine canopy and crop load. Different varieties or cultivars of the same species respond differently to *ProTone* SG. For specific variety or cultivar information contact your Valent representative. With increasing temperature and lower humidity consider using the higher rates within the range given in the application rates, remembering not to apply to plants that are under stress.
- Increased coloration of grape berries has been achieved with bunch directed sprays applied by calibrated commercial spray equipment. Apply *ProTone* SG in a sufficient amount of water to ensure uniform, thorough, but not excessive coverage of the grape bunches. Product efficacy requires that all bunches, and berries within bunches, receive thorough and complete coverage. Adjust spray volumes to achieve thorough coverage based on vine size, spacing, trellis system, vine canopy, and spray equipment.
- Best results will be achieved from applications during the cooler parts of the day or night, avoiding the hottest period of the day. To maximize absorption and optimize product effectiveness, apply *ProTone* SG under slow drying conditions, e.g., early in the morning, in the evening or night (coolest daily temperatures, medium to high relative humidity, and no wind). Do not make applications during the day or early evening when the fruit is still hot.
- *ProTone* SG has been shown to enhance the color of grape cultivars that have difficulty developing color and helps increase color of grapes grown in poor coloring areas. However, under very poor color development conditions (e.g., excessively hot day and night temperatures, heavy crop load, poor growing conditions) application of *ProTone* SG does not always give adequate color development. Serious consideration is to be given, on a block-by-block basis, to any vineyard conditions (elevation, sun exposure, soil texture, growing condition, prevailing or anticipated weather patterns such as high temperature, drought or flood conditions, nutrient levels) or production practices (vine size, vine spacing, vine canopy, crop load, trellis system, pruning) that impact fruit color development.
- Under conditions where color development of grapes is good (e.g., growing areas with a history of good color development, years in which there is color development, cultivars that already develop sufficient color), application of *ProTone* SG will not provide significant additional color or advance the harvest period.
- In most cases color development resulting from *ProTone* SG application will be visible 5 - 7 days after application.

CONTINUED

**THINNING OF APPLES AND PEARS:**

CROP/	OBJECTIVE/ BENEFIT	APPLICATION INSTRUCTIONS
<b>Apples</b>	For early season fruit thinning to selectively remove fruitlet from the tree in order to increase size and quality of retained fruit.	Apply 6.6 - 33.1 ounces (188 - 938 grams) of <i>ProTone</i> SG per acre per application. These rates correspond with 100 - 500 ppm at 100 gal/A spray volume. Make 1 - 2 applications of <i>ProTone</i> SG when the average diameter of king fruitlets is between 5 - 20 mm. Direct 80% of the spray into the upper 2/3 of the tree canopy. Generally one application is sufficient for fruit thinning. If a second application is needed to achieve additional thinning: 1. Allow 7 - 10 days between applications to observe the effect of the first application. 2. Make the second application no later than 20 mm average king bloom fruitlet diameter.
<b>Pears</b> (Not for use in California)	For early season fruit thinning to remove fruitlets from the tree in order to increase size and quality of retained fruit.	Apply 6.6 - 33.1 ounces (188 - 938 grams) of <i>ProTone</i> SG per acre per application. These rates correspond with 100 - 500 ppm at 100 gal/A spray volume. Use higher rates in well cross-pollinated orchards or varieties that have a history of being difficult to thin. Make 1 - 2 applications of <i>ProTone</i> SG when the average fruitlet diameter is between 5 - 20 mm and the weather forecast is favorable for product performance as noted in the additional instructions below. Generally, one application is sufficient for fruit thinning. If a second application is needed to achieve additional thinning: 1. Allow 7 - 10 days between applications to observe the effect of the first application. 2. Make the second application no later than 20 mm average fruitlet diameter.

**Additional Instructions:**

- Direct 80% of the spray into the upper 2/3 of the tree canopy.
- Apply *ProTone* SG in the morning or evening when conditions are best for slow drying (cooler temperatures and higher humidity), in order to ensure adequate absorption of the product. Avoid application over heavy dew as excessive runoff may occur. Air temperature during application should not exceed 85°F.
- Product performs best at water pH 5 - 7; do not exceed pH 8.5.

- Apply in a sufficient amount of water to ensure thorough coverage without runoff. Use calibrated spray equipment to ensure uniform coverage of leaves and fruit. Adjust water volumes based on tree size and spacing. In many cases, spray volumes of approximately 100 gal per acre have been shown to be adequate. Excessive water volumes that result in runoff can cause foliar injury.
- Temperatures and weather conditions during application and the following 2 - 3 days can affect product performance. For further information consult your Valent Agricultural Specialist (1-800-6 VALENT).
- For best results, apply when the weather forecast calls for either or both of the following conditions: 2 - 3 consecutive days of significant cloud cover; and/or 2 - 3 consecutive days of daytime high temperatures of at least mid-70s °F for pears or mid 80s °F for apples.
- Use of a non-ionic surfactant at the final adjuvant concentration directed by the manufacturer can enhance performance.
- *ProTone* SG has been shown to be highly synergistic with other thinning agents. Use caution if tank mixing with any other thinning products as over-thinning may result.
- Use of *ProTone* SG may result in leaf yellowing and/or leaf drop.

**PROTONE SG CONVERSION TABLE**

GRAMS OF PROTONE SG	OUNCES OF PROTONE SG	GRAMS OF S-ABA	PPM CONCENTRATION OF S-ABA (AT 100 GAL/A SPRAY VOLUME)
188	6.6	38	100
375	13.2	75	200
564	19.8	114	300
750	26.5	150	400
938	33.1	188	500

**DEFOLIATION OF FRUIT AND NUT TREES AND VINES**

**Nursery operations** are challenged to completely defoliate trees prior to digging/lifting activities in the fall. S-ABA has been shown to hasten natural leaf senescence and abscission when applied as a foliar spray in combination with other defoliating materials before dormancy.

**In established orchards**, where the rapid onset of winter can interrupt the normal senescence and drop of leaves and the progression into dormancy, vigorous trees (particularly new plantings) can be damaged. The use of S-ABA can accelerate leaf abscission and prepare trees for dormancy when applied together with other defoliating materials.

CONTINUED



**DEFOLIATION OF FRUIT AND NUT TREES AND VINES Cont'd.**

CROP/	OBJECTIVE/ BENEFIT	APPLICATION INSTRUCTIONS
<b>Fruit and nut trees and vines</b> (in nursery and under orchard conditions)  (Not for use in California)	For acceleration of leaf senescence and abscission.	Make 1 - 2 foliar applications of <i>ProTone</i> SG in combination with other defoliating materials in late fall before the onset of dormancy when defoliation is required. Allow 7 - 14 days between applications to observe the effect of the first application.  <b>Application rates:</b> Apply 16.5 - 66.1 ounces (469 - 1,875 grams) of <i>ProTone</i> SG per acre per application. These rates correspond with 250 - 1,000 ppm at 100 gal/A spray volume. Use higher rates on varieties that are typically difficult to defoliate with standard methods. Spray volumes ranging from 50 - 200 gal/A can be used.

**Additional Instructions:**

- *ProTone* SG has been shown to improve the effectiveness of other defoliating agents when applied in a tank mix.
- Apply in a sufficient amount of water to ensure thorough coverage without excessive runoff. Use calibrated spray equipment to ensure uniform coverage of leaves. Adjust water volumes based on tree size and spacing. Hydraulic sprayers equipped with drop nozzles are recommended for use in nursery defoliation.
- Addition of surfactants has been shown to improve defoliation.
- Frost event(s) following applications of *ProTone* SG will increase defoliation.
- For further information consult your Valent Agricultural Specialist (1-800-6-VALENT).

**CONVERSION TABLE**

GRAMS OF PROTONE SG	OUNCES OF PROTONE SG	GRAMS OF S-ABA	PPM CONCENTRATION OF S-ABA (AT 100 GAL/A SPRAY VOLUME)
188	6.6	38	100
375	13.2	75	200
469	16.5	94	250
564	19.8	114	300
750	26.5	150	400
938	33.1	188	500
1000	35.3	200	533
1250	44.1	250	667
1500	52.9	300	800
1875	66.1	375	1,000

**7.0**

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Keep container tightly closed when not in use. Store product in a cool and dry place. Avoid extended storage conditions at temperatures above 25°C (77°F). Avoid exposure of product to light.

**Pesticide Disposal:** To avoid waste, use all material in this container by application according to label directions. If waste cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Offer for recycling, if available or puncture and dispose of the container in a sanitary landfill, or by other procedures approved by state and local authorities.

**8.0**

**WARRANTY AND DISCLAIMER STATEMENT**

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

*ProTone* is a registered trademark of Valent BioSciences LLC.

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