

CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

ProTone[®] SG

PLANT GROWTH REGULATOR SOLUBLE GRANULE

ACTIVE CONSTITUENT: 200 g/kg S-ABSCISIC ACID

To accelerate or increase the red colouration of berries and bunches of red table grape varieties (*Vitis* spp.)

GENERAL INSTRUCTIONS

ProTone SG contains the natural plant hormone S-ABA (Abscisic Acid). S-ABA stimulates anthocyanin biosynthesis and accumulation. S-ABA mediates a number of responses in grapes (*Vitis* spp.) including switching on the anthocyanin genes. Anthocyanins are responsible for the red colour of the skins of the red varieties of table and wine grapes. This process occurs naturally in grapes and other plant species but the extent of the colouration can be reduced when the grapes are grown in hot conditions or when shaded (such as when grown under plastic 'rain covers'). Weather and seasonal conditions, rootstocks, soil types and other factors can all lead to grape colouration which may be insufficient for marketing.

Applications of ProTone SG can accelerate or increase red grape colouration. In most cases colour development resulting from ProTone SG application will be visible 5 to 7 days after application. Colour development initiated by ProTone SG may continue for 2 to 3 weeks. Under very poor colour development conditions (eg excessively hot day and night temperatures, heavy crop load, poor growing conditions) application of ProTone SG may not give adequate red colour development.

ProTone SG has not been shown to accelerate or enhance sugar development in grapes and growers should be aware that even though the grapes may have sufficient colouration they may have insufficient sugar for some markets. This means that the grapes should be left on the vines until sugar accumulation has reached that expected by the market.

It is recommended that 'rain covers' are used to protect berries and bunches that may be prone to splitting as the surfactants used with ProTone SG may impact on berry turgor in conditions conducive to berry splitting resulting in increased splitting.

For spraying under rain covers, the top nozzles should be shut-off and the lower nozzles angled to give appropriate coverage to the targeted bunches. Water volume/ha should be maintained by adding more low-flow nozzles to the sprayer and not by increasing nozzle size. More information on appropriate sprayer set-up for ProTone SG is available from your local retail agronomist or from your Sumitomo Chemical Australia representative.

Veraison is the initial stage of grape ripening and is marked by changes in colour and softening of the berry. At or near veraison, grape berries become responsive to ProTone SG. For ProTone SG applications under Australian conditions, veraison is considered to be where 10%-30% colour occurs in the block to be treated.

Vines should not be under water, insect or other stress. Make sure vines are watered prior to application of this product. Apply under cool conditions as these are best for slow drying of applied material to ensure adequate absorption of product into the berry skins.

MIXING

DO NOT premix ProTone SG with water in a small container prior to adding to the spray vat. Fill spray vat with 70%-80% of required volume and agitate. Add required quantity of ProTone SG and surfactant while still agitating. Add the remaining water. Maintain good agitation while travelling to the block to be sprayed and during spraying.

Pomade™ Wetting Agent must be added to the spray vat in order to aid the wetting of berry skins by ProTone SG. Pomade™ Wetting Agent should be used at 20-50 ml/100 L but to a maximum of 500 ml in a full spray vat. Please contact your Sumitomo Chemical Australia representative for more information.

DO NOT leave solutions in spray vat overnight.

APPLICATION

Apply in a sufficient amount of water to ensure thorough coverage of the berries and bunches as application to vine foliage has no effect on grape colouration. Water volume would normally range from 1750 to 2500 L water/ha depending on the canopy structure, age of vines, density of foliage and type and condition of spray equipment. It is essential to ensure even coverage on all bunches and on both sides of the bunches. Fine or smaller droplets will assist in obtaining even coverage. It is recommended that growers setup and calibrate their sprayers in order to direct sprays at grape bunches and to achieve even coverage. Uneven coverage will result in uneven fruit colouration

Apply ProTone SG when conditions favour slow drying for maximum absorption (low wind speed, moderate relative humidity and moderate air and fruit temperature).

Apply in the coolest hours before sunrise to give the berries maximum time to cool down. Do not apply ProTone SG during the day or early evening when the fruit is still hot.

Apply in early morning or at night if daytime temperatures exceed 30°C.

Prolonged periods of high temperatures inhibit anthocyanin and colour development.

If abnormally high day and night temperatures occur and persist for several days prior to or during veraison, use the higher label rates and try to wait until cooler temperatures return before application.

ProTone SG can be applied as a single application but, for varieties where the time from veraison (10%-30% colour in the block) to harvest is extended (4-12 weeks), multiple applications may need to be considered.

When using low dose rates (25 g/100 L) there may be insufficient colouration from a single application and multiple applications may be necessary.

If multiple applications are being considered prior to any spray applications for the season then low rate applications of around 25 g/100 L should be used from veraison onwards, with resprays every 2-3 weeks until the desired colour is achieved.

DO NOT apply multiple applications of high rates (100g/100L water) in high water volumes (>2500 L water/ha). In some situations, this may result in excessive colouring, softening or splitting or berry shatter in storage in cultivars susceptible to these problems – for more information please contact your Sumitomo Chemical Australia representative.

DO NOT apply more than 5kg/ha ProTone SG per season.

The possible effects of ProTone SG on integrated pest management (IPM) strategies have not been studied. However, based on available information, it cannot be ruled out that ProTone SG may have an adverse effect on non-target beneficial insects where IPM is practiced.

COMPATIBILITY:

DO NOT mix with other products as the compatibility of ProTone SG with other products has not been investigated.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

S-Abscisic acid is a plant growth regulator, which is toxic to aquatic plants.

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops.

PROTECTION OF LIVESTOCK, WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT:

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL:

Store in the closed, original container in a well-ventilated area, as cool as possible. **DO NOT** store for prolonged periods in direct sunlight. Triple rinse containers before disposal. Add rinsings to spray tank. **DO NOT** dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point.

If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. **DO NOT** burn empty containers or product

SAFETY DIRECTIONS:

May irritate the eyes and skin. Avoid contact with eyes and skin. When preparing spray wear elbow-length chemical resistant gloves. Wash hands after use. After each day's use wash gloves.

FIRST AID:

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.

SAFETY DATA SHEET:

Additional information is listed in the Safety Data Sheet.

EMERGENCY INFORMATION:

Contact Sumitomo Chemical Australia Pty Ltd, 51 Rawson St, NSW 2121, Australia. Telephone Number 1 800 060 671.

IMPORTANT NOTICE

These goods are to be used only for the purpose and as specified on the label, and are not suitable for any other purpose. To the fullest extent permitted by law, we do not accept or bear any liability on any basis for any loss, damage, cost or expense, arising in any way, directly or indirectly, in connection with the goods.

™ Valent BioSciences LLC and ProTone are registered trademarks and/or trademarks of Valent BioSciences LLC in the United States and elsewhere. Pomade™ is the trademark of AgriNova NZ Ltd, Wellington, NZ

© Valent BioSciences LLC 2019

APVMA Approval No. 63314/120661

THIS PRODUCT IS NOT CONSIDERED TO BE A DANGEROUS GOOD UNDER THE AUSTRALIAN CODE FOR THE TRANSPORT OF DANGEROUS GOODS BY ROAD OR RAIL.

IN A TRANSPORT EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE

SPECIALIST ADVICE IN EMERGENCY ONLY ALL HOURS - AUSTRALIA WIDE 1800 024 973



DIRECTIONS FOR USE

**Restraint: DO NOT apply to plants under pest, nutritional or water stress.
DO NOT apply if rainfall or overhead irrigation use is likely within 6 hours of spraying.
DO NOT apply with aircraft.**

CROP	USE	SITUATION	RATE	TIMING	CRITICAL COMMENTS
Table Grapes (<i>Vitis</i> spp.)	Accelerate or increase the red colouration in berries and bunches	Where the time between veraison and 1 st pick is expected to be less than 3-4 weeks	25-100 g/100 L	From 1 week prior to veraison until veraison	<p>Typical for varieties such as Flame Seedless and Ralli Seedless, but also suitable for some blocks of other varieties such as Crimson Seedless and Red Globes where rapid maturation is typical.</p> <p>Apply in 1750 to 2500 L water /ha with Pomade™ Wetting Agent as detailed in Mixing Instructions.</p> <p>Ensure even coverage of all bunches as uneven coverage may result in unevenly coloured bunches especially when using rates above 50 g/100 L.</p> <p>Colour responses increase with increasing dose rate and it is recommended that growers initially spray small areas with lower dose rates (25-50 g/100L is the recommended starting point) in order to gain familiarity with ProTone SG effects on specific blocks as the effect will vary based on variety, canopy structure, crop load, rootstock and season.</p> <p>Multiple applications or higher label rates of ProTone SG may be required under excessive heat conditions – refer to Application Section for further information.</p> <p>When making multiple applications DO NOT apply more than 5kg/ha ProTone SG per season.</p>

CROP	USE	SITUATION	RATE	TIMING	CRITICAL COMMENTS
Table Grapes (<i>Vitis</i> spp.)	Accelerate or increase the red colouration in berries and bunches	Where the time between veraison and 1 st pick is expected to be greater than 3-4 weeks	25-100 g/100 L	From 1 week prior to veraison to 2-3 weeks prior to harvest	<p>Typical for varieties such as Crimson Seedless and Red Globe, but also suitable for some blocks of other long-season varieties. These types of varieties typically respond best to treatments initiated one week after veraison.</p> <p>Apply in 1750 to 2500 L water /ha with Pomade™ Wetting Agent as detailed in Mixing Instructions.</p> <p>Ensure even coverage of all bunches as uneven coverage may result in unevenly coloured bunches especially when using rates above 50 g/100 L.</p> <p>Colour responses increase with increasing dose rate and it is recommended that growers initially spray small areas with lower dose rates (25-50 g/100L is the recommended starting point) in order to gain familiarity with ProTone SG effects on specific blocks as the effect will vary based on variety, canopy structure, crop load, rootstock and season.</p> <p>Multiple applications or higher label rates of ProTone SG may be required under excessive heat conditions – refer to Application Section for further information.</p> <p>Multiple applications may be necessary in poor colouring blocks or where growers have used lower dose rates at veraison and the colour enhancement is still insufficient for marketing. Maximum effect of ProTone SG is achieved 2-3 weeks after application (although the grapes may continue to colour naturally) and growers should examine the sprayed blocks after 2-3 weeks in order to determine if further sprays are necessary.</p> <p>In varieties with multiple and extended harvests, applications can be made to enhance the colour of later harvests by applying ProTone SG at 25 g/100 L 2-3 weeks prior to the next harvest.</p> <p>When making multiple applications DO NOT apply more than 5kg/ha ProTone SG per season.</p>

NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL, UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

**WITHHOLDING PERIOD:
NOT REQUIRED WHEN USED AS DIRECTED.**