

EuroChem DUOMAX[®] HC520



PLANT GROWTH REGULATOR

For the regulation of bud burst in Apples, Grapes and Kiwi Fruit as specified in the Directions For Use table.

ACTIVE INGREDIENT AND CONCENTRATION

520 g/L CYANAMIDE

Duomax HC520 Plant Growth Regulator is a valuable tool for the management and control of table grape vines.

Duomax HC520 is a very effective bud-breaking product.

Uniform bud-break or bud-burst provides many advantages to vineyard management.

This Tech Note details the product and explains the factors that need to be considered when applying the product to maximum benefit.

WHY THE SEARCH FOR A UNIFORM BUDBURST?

To survive in the wild, Grapevines have evolved a natural tendency to flower and set fruit over a period of time so as not to succumb to any adverse weather conditions in any one particular year.

However, in a commercial vineyard the staggered budburst and crop development makes management more difficult and expensive.

Duomax HC520 was developed to initiate a more even budburst which overcomes this staggered development of the crop, leading to a more efficient and cost effective way to manage the vineyard.



Wild grapevine.



Vine showing an uneven budburst.



Vine showing typical results of a uniform budburst, as can be achieved with an application of Duomax HC520.

THE BENEFITS OF DUOMAX HC520

- **Earlier budburst** – In warmer areas, where there is no risk of damage from cold weather, an earlier budburst can be used to harness the higher spring temperatures and allow the vine to benefit from a longer growth period and accumulate more sugar during bunch development. This leads to earlier deliveries to market, often with higher quality fruit and consequent higher selling prices.
- **Improved yields** – Poor budburst, or even a complete failure to produce buds, may occur in vines located in areas of inadequate chilling, such as the tropics, resulting in little or no fruit production. The use of **Duomax HC520** in this situation will bring on a full budburst with subsequent commercially viable loads of fruits.

IMPROVED VINEYARD MANAGEMENT

The shorter bud-break and the subsequent uniformity of crop development produced by an application of **Duomax HC520** greatly improves the management of the vineyard with regard to the following:

- **Improvements in Disease/Pest Control** – The uniform budburst induced by **Duomax HC520** leads to a more uniform flowering and development of the crop. This makes it easier to determine and manage the disease and pest control programs that are required during certain growth phases of the crop.
- **Use of other Plant Growth Regulators** – During the growing process the vines will be treated with other Plant Growth Regulators, such as EuroChem Gibb 100, EuroChem CPPU 10 and EuroChem Red Colouring Agent, where uniform berry coverage is required during spraying.

An application of **Duomax HC520** will make the vines develop with more uniform flowering and fruit development, making it easier for the grower or vineyard manager to determine when the optimum flowering and fruit stage has been reached for effective application of the Plant Growth Regulators.

- **Improvements in Harvesting** – An application with **Duomax HC520** will result in a vine crop that will have a higher yield on the first pick. For example, in a typical case where 60% of the crop can be removed on the first pick in a **Duomax HC520** treated block, only 30% was typically removed in the untreated areas.
- **Improvements in Marketing the Crop** – Generally prices for fruit are higher in the earlier part of the season, so any increase in yield at this time should result in higher profits.

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OPTIMUM USE OF DUOMAX HC520

Duomax HC520 is a plant growth regulator that can be a valuable management aid in vineyards. However, there are some important aspects to consider to maximise the value of a **Duomax HC520** application.

REFER TO THE PRODUCT LABEL FOR FULL DETAILS

CORRECT TIMING

The best time to apply **Duomax HC520** will vary depending upon the incidence of frost or cool weather and therefore, the intended timing for bud-break.

Each particular region, and even farm location within a region, will have its own local requirements and it is important to initially consult an advisor to determine local experience with the product.

In general however, the best use of **Duomax HC520** is achieved by considering the following:

1. **Duomax HC520** is applied after pruning to obtain the best coverage of the dormant buds.
2. **Duomax HC520** should not be applied too close to the natural bud-break, as the product can damage emerging leaves.
3. Bud-break will normally occur 30–35 days after the application of **Duomax HC520**, unless conditions are warm after application, when bud-break may occur in 14–21 days, such as in coastal and northern areas of Australia, i.e. sub-tropical and tropical areas.
4. **Duomax HC520** should not be used to bring forward bud-break in regions where frost damage may occur after bud-break or where cool weather (less than 15°C) may occur during the subsequently earlier flowering period.

CORRECT APPLICATION METHOD AND RATE

For Table Grapes, the label use rate is 3–5L/100L of water or 3–5% spray. The lower rate (3%) should be used where a cold winter has occurred to naturally chill the crop.

The product should be applied with a non-ionic wetter to ensure thorough coverage and wetting of all cordons, spurs and canes.

In practice, this rate of 3–5% will result in about 75 to 100mLs of solution being applied per vine, depending on application equipment and vine size.

As **Duomax HC520** is not a systemic product, coverage of all target buds is essential.

WITHHOLDING PERIOD
NOT REQUIRED WHEN USED AS DIRECTED.

DIRECTIONS FOR USE

CROP	MODE OF ACTION	STATE	RATE	CRITICAL COMMENTS
Apples	Regulation of bud dormancy	All States	2–3L per 100L water	Apply at 30 to 45 days before expected budburst (50% greentip on spurs) of apples (refer to the product label for full details), to advance budburst and flowering. Apply as a fine spray to the point of runoff, so that complete coverage of buds is achieved. Use the higher rate of application where more difficult budbreak conditions occur such as on varieties requiring higher chilling on warm northern slopes and/or where there has been a warmer winter. DO NOT apply to apples later than 25 days before expected budburst, as this will not result in advanced budburst and flowering and damage to buds may occur. Higher temperatures immediately before and in the 3–5 days following application will improve the response. Conversely, cold weather following application will reduce the response.
Kiwi Fruit	Regulation of bud dormancy	QLD, NSW, VIC, & WA only	4–6L per 100L water	Apply to dormant canes, cordons or trees, using sufficient spray volume to ensure thorough coverage of all buds.
Table Grapes		All States	3–5L per 100L water	DO NOT apply the chemical within 2 weeks of anticipated natural bud break of kiwi fruit. Bud break will usually occur 30–35 days later, although if warm conditions occur after application, bud break could occur 14–21 days later.
Wine Grapes		All States	2–3L per 100L water	Note: New shoots may be damaged by frost. If applied earlier than 35 days before natural bud break, low temperatures at flowering may reduce fruit set. Lower dose rates should be used when there has been a cold winter to naturally chill the crop.

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

APVMA Approval No.:
58843/63165

PACK SIZE:
20L, 200L, 1000L

MANUFACTURED
IN AUSTRALIA



EuroChem DUOMAX® HC520



PLANT GROWTH REGULATOR

STABILITY PRODUCT CRYSTALLIZATION.

Duomax HC520 is a unique formulation developed for Australian conditions with a particularly good stabilizer system known as StabuTex HyCy, which means the product is stable, fully active and effective for the whole of the spraying season.

Other commercially available Hydrogen Cyanamide products have suffered from “crystallization” and hence low strength*. Users of **Duomax HC520** can be assured of a product that is robust and “full strength” with no by-product “crystal” deposits to reduce activity or block nozzles.



Photo of how Duomax HC520 looks.



Photo of how a competitors crystallized product looks.

* Products containing Hydrogen Cyanamide are inherently unstable – unless the formulated product incorporates a good stabiliser system and the product is kept cool, the active hydrogen cyanamide will undergo reactions to produce an insoluble crystalline by-product, which collects at the bottom of the drum. This causes a lowering of the % active content of the product leading to less active in the spray tank and a blocking of spray nozzles on application.

OPERATOR SAFETY PRECAUTIONS

Duomax HC520 has an unusual restraint in that alcohol consumption 24 hours before, during or after use is not allowed. Unintentionally inhaled spray interferes with, and delays, the metabolism of alcohol in the body. In rare cases, where individuals are very sensitive, a “cyanamide-flush” will occur which shows as a reddish flush of the skin. This disappears in a short time when the individual is removed to fresh air or given oxygen treatment.

Duomax HC520 is also a severe skin irritant and every precaution should be taken with handling.

REFER TO PRODUCT LABEL FOR FULL SAFETY AND HANDLING DETAILS.

STORAGE

Duomax HC520 is especially formulated with stability agents to maintain its active strength and integrity for use during the spraying season, but it should be stored and handled at less than 20°C.

To maintain its stability and integrity for up to its expiry date of a year after manufacture, the product should be stored at 4°C.

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SCAN FOR INFO

