

Flower & plant care

Building a sustainable business



CHRYSAL

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Building a sustainable business

Towards a zero impact future

The IPCC reports are very clear: we all need to step up our efforts to have a sustainable future. While we have always been committed to reducing waste and water use, we started our Chrysal Cares programme in 2009. Now we have put sustainability first and at the centre of our business strategy. We still have many challenges to overcome, but we are committed to build a truly sustainable business and flower industry. We want to help all our partners to reach their ambitions by providing sustainable solutions and technologies and also by sharing our knowledge and best practices.

Join our quest at chrysal.com



CHRYSAL



CHRYSAI CARES

In everything we do,
we ask ourselves:
does it contribute to a
healthy and beautiful
planet?

Your sustainable partner

Sustainability is an integral part of who we are and how we work. We create a caring workplace for our employees and bring added value to the sustainability ambitions of our customers. Together we strive to set the standard for sustainability in our industry.

Reduce waste and water usage

We have a strong focus to reduce waste and water use for every stage in the horticultural chain, through our products, advice and protocols. This way we aim to be the most sustainable partner and believe that by working together with partners we can achieve more and have an even bigger impact.

Chrysal Cares

Our Chrysal Cares program was originally developed in 2009 and that was the start of our sustainability journey. In this last decade we have learned a lot. Chrysal Cares is built around our four ways to a zero impact future:

1. Fighting climate change

- Climate neutral by 2030, striving for a positive impact afterwards.

2. Contributing to a sustainable economy

- Moving towards 50% circular by 2030, 100% in 2040.

3. Caring for people

- Enhancing lives and work experience.

4. Striving for a positive environmental impact

- Positively contributing to the environment we depend upon.

Check our website chrysalcares.com for more information and how we can help you with your own sustainability ambitions.





CHRYSAL CARES

Smart energy use

Towards climate neutrality



Target:

Climate neutral by 2030, striving for a positive impact afterwards

Zero emissions

- Reducing our CO2 emissions
- Increasing energy efficiency
- Using sustainable energy sources

Transport

- Contributing to innovative transport
- Enabling smart mobility

To achieve this, we have set ourselves the following targets:

- Zero Carbon Footprint in Scope 1 by 2025.
- Reduce energy consumption by 25% by 2030.
- Reduce our sourcing impact with 25% by 2025.
- 100% renewable energy internationally by 2025.
- Reduce our CO2 emissions by 25% in outbound transport by 2025.
- Full international roll-out of Ecochain by the end of 2022.
- Full end-of-life footprint calculations per product group by 2022.

One of our targets has already been completed: 100% of products have an LCA on CO2 emissions.

Carbon footprint

Calculations showed that our operations account for only 3.4% of our carbon footprint in 2020 and that 96.6% is coming from our suppliers. This is because we use green (wind) energy, solar panels, LED lighting and we have invested in energy and gas reduction. An example of this is that we started mixing our liquid formulas with cold tap water. We are reducing our scope 3 emissions by making the right choices for our ingredients and are recommending the products with the lowest footprint to our customers. With our sea freight service we give farms and customers the opportunity to use sea-freight over air-freight providing a major reduction in carbon footprint of up to 90% shipping from Kenya to the Netherlands. With our sustainable packaging we also help customers reduce the footprint of their packaging and contribute to a circular economy.

Next to that, we have increased the quantities of many of our items to increase the amount of products per pallet and to reduce transport emissions and carton use.





CHRYSLAL CARES

Less water use

We create smart solutions



2. Contributing to a sustainable economy



Target:

**50% circular by 2030,
100% in 2040**

Circular Economy

- Minimizing waste
- Maintaining water quality
- Using circular packaging
- Using sustainable ingredients

Responsible business

- Maintaining a responsible supply and value chain
- Operating transparently

Contributing to a circular economy

We focus on having circular packaging, made entirely from non-virgin material and fully recyclable or re-usable. We will also use only sustainably sourced ingredients, minimizing our waste and maintaining water quality.

We already have a complete line of sustainable flower food sachets. And with our Bag-in-Box packaging for Professional we use up to 70% less plastic. But we don't stop there.

Our targets:

- All of our packaging is made of entirely non-virgin material by 2030.
- All of our products have recyclable, re-usable

or compostable packaging by 2025 and fully recyclable or re-usable by 2030.

Responsible business

It is of utmost importance to us to maintain a responsible supply and value chain and to operate transparently. In order to achieve this we will have to work together with our suppliers and partners. For that we have set ourselves the following targets:

- Purchase vendors adhere to our Chrysal Supplier Code by 2022.
- Sustainability as a selection criterion in our purchasing decisions with all our suppliers by 2025.





CHRYSAL CARES

Caring for people

Enhancing lives and work experience



3. Caring for people



Enhancing lives and work experience

At Chrysal we care about people. We create a caring workplace for our employees by valuing health and safety as a high priority and responsibility and by ensuring equality and diversity. Furthermore, we are supporting local communities by contributing to their health and education and by supporting local development. The topics we are focusing on:

Caring Workplace

- Improving employee health and safety
- Ensuring equality and diversity
- Being the employer of choice

Community engagement

- Contributing to health & education
- Supporting development

We are ETI certified, and we have Fairtrade certified products in our portfolio since 2009.

Within our company, we encourage healthy eating and exercise for our employees. We have a Green Team in place, a group of enthusiastic ambassadors who are helping to increase awareness on sustainability themes, looking for initiatives and improvements and are trying to get everyone on board to do the same.

Projects

We have always been supporting local projects all over the world. Local projects we are currently supporting are:

- Tania Institute - Kenya
- Drip Irrigation Project - Kenya
- Bees for Development - Africa and Asia
- Social Responsibility Program Quito - Ecuador
- Floral Angels - UK
- Chrysal Bees - Netherlands
- Flowers Memorial Day - USA
- Bird Sanctuary – Netherlands



Tania Institute - Kenya



CHRYSLAL CARES

Protect the bees

We support biodiversity



4. Striving for a positive environmental impact



Positively contributing to the environment we depend upon

By fighting climate change and contributing to a sustainable economy, we eliminate any negative effects we have on the environment as a business. But we aim to take that one step further and also positively contribute to the environment we depend upon. By actively supporting biodiversity and enabling sustainable land & water use.

Sustainable use of resources

- Enabling sustainable land & water use
- Supporting biodiversity

Biodiversity

Biodiversity refers to all the variety of life that can be found on Earth (plants, animals, fungi and micro-organisms) as well as to the communities that they form and the habitats in which they live. The loss of biodiversity has increased at an alarming rate in the 20th century. Climate change is already affecting species distributions all over the world and will impact nature considerably in the 21st century.

Chrysal bees & Bees for Development

Bees are extremely important to nature. They help flowers and plants reproduce and thus form a crucial part of the ecosystem. Much to our dismay bees are struggling worldwide. In some areas bees have even completely disappeared.

Chrysal helps fight the decline in bees, both locally and abroad. We do this by supporting Bees for Development in Africa. This is a local initiative which helps families in Uganda and Ethiopia set up their own hives providing them with a means to generate much needed income. Also, at our headquarters in Naarden we have 3 bee colonies in our gardens.





Caring for our customers
Innovating for the future



Service and innovation

Chrysal is widely known for its total-care and full-care solutions. Research is key to staying ahead in our increasingly competitive and rapidly changing markets. We have a rich history as forward-thinking entrepreneurs, making us well-equipped to deal with these challenges. By understanding your changing business needs, we can offer you a full range of services to effectively help you grow your business.

Full-care solutions

Our Research & Development laboratory in the Netherlands, has been the origin of all our innovations for decades. Our specialists use leading-edge technology and in-depth understanding of the processes involved at each stage of the flower and plant journey, to create total-care solutions for all our customers. Our formulas are subject to rigorous testing and, if they meet our high-quality standards, are submitted to the Dutch Ministry of Agriculture, Nature, and Food Quality for approval. We conduct extensive market research into what our customers need today and what they will need tomorrow, incorporating our findings into each new innovation.

Broad support for our customers

Our Technical Consultants (TC's) provide you technical and advisory support onsite and at our locations around the world. During audits, our TC's recommend ways of improving your overall quality of flowers and potted plants. These recommendations cover hygiene, dosage, length of treatment as well as the best way of applying our products. We also offer support for retailers and florists, on all aspects of the sales process, from marketing and waste management to the optimum dosage of our products. And we can help you with various marketing tools, such as developing private labels, displays and training to help your business grow. With our support and advice, we have only one goal in mind: find the best solution to match your specific needs.





Global presence

Chrysal is present in countries that are of major importance in the flower and plant industry. Either because of their grower areas (South America, Africa, Asia) or because of their market position in trade and retail (Western Europe, USA, and Japan).

We have operations all over the world, and production facilities in countries of major importance in the flower industry. Our distribution network spans all continents. In recent years we have brought our production facilities closer to our customers. We maintain a network of technical consultants, as well as representatives from the Chrysal Operations

Group, in all our growing and consuming countries. We guarantee that our business in those countries meets the same ethical and quality standards as our business in the Netherlands. Chrysal International is ISO and ETI certified and works in accordance with BRC standards.

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The journey of a flower

On their journey from farm to vase, flowers and plants can face some tough conditions. They may travel through different countries and it can be a challenge to ensure an optimum level of water uptake and adequate nutrition. We have developed solutions to address all these issues, keeping quality high and waste low at all stages of the journey. The result? Flowers and plants that look fresh for longer.

1. Hygiene

Flowers and plants stay fresher longer when placed in hygienically clean buckets, vases and trays and when they are handled with hygienically clean tools. Our products help to maintain the quality and ultimately to increase the vase life.



4. Conditioning

Flowers and potted plants need to be kept hydrated during transport and in-store display, and their buds and blooms managed correctly. Our conditioning products don't just enhance quality, they extend the sales period too.

2. Crop treatment

Cultivating flowers is all about creating the optimal circumstances to grow. Our products keep flowers healthy and strong, optimize production, minimize waste and protect them from diseases and stress.



5. Arrangement and design

For the most beautiful creations, whether in vases, pots or floral foam, you need to keep the flowers, foliage and plants fresh and hydrated at all times. We have different products which enhance colours, reduce evaporation and improve the opening of buds.



3. Post-harvest treatment

From the moment they are harvested, flowers and plants start to lose their vitality. Our post-harvest solutions boost quality, reduce waste and improve the opening of buds. That way, they stay fresh for longer!



6. Flower food

Quality doesn't stop in the shop! We offer different kinds of flower food that help increase vase life by up to 60% compared to water alone. Flower food stimulates the optimal development of buds and blooms, nurturing beauty for as long as possible.





Hygiene

Flowers and plants stay fresher longer when placed in hygienically clean buckets, vases and trays and when they are handled with hygienically clean tools. Our products help to maintain the quality and ultimately to increase the vase life.



Optimal hygiene to help increase vase life

Chrysal Cleaner

ensures all your tools and your dosing units remain free of limescale and organic dirt. It is a gentle product with degreasing action, biodegradable and user-friendly. This product is not harmful to flowers.

Effects & benefits:

- Removes quickly and effectively limescale and organic dirt.
- Reduces flower wastage, cleaning labour and water usage.
- Dosing units remain free of limescale when cleaned weekly.
- Not phytotoxic to flowers and causes no ornamental loss.

Extra info:

- Available in 1 litre bottles.



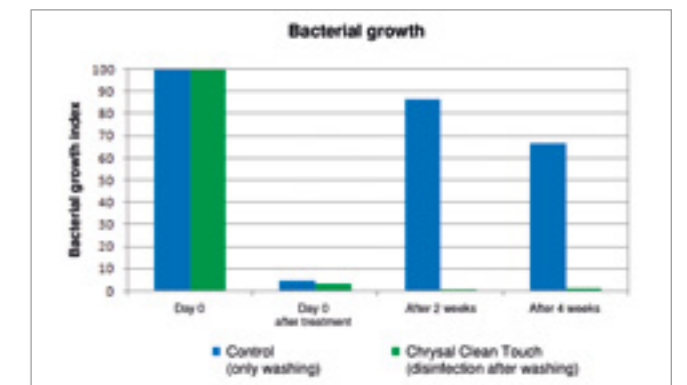
Chrysal Cleaner is biodegradable and not harmful to flowers.



<https://www.chrysal.com/products/chrysal-professional-cleaner>

Chrysal Clean Touch concentrated

effectively kills bacteria, with a long-lasting effect, up to 4 weeks. It is especially developed for the professional market, only to be used in automated bucket washing machines.



Effects & benefits:

- Effectively kills bacteria.
- Odourless and effective for up to 4 weeks.
- Reduces flower wastage and reduces cleaning labour.

Extra info:

- Available on request for large users in 25 litre can.



<https://www.chrysal.com/products/chrysal-clean-touch>



Crop treatment

Cultivating flowers is all about creating the optimal circumstances to grow. Our products keep flowers healthy and strong, optimize production, minimize waste and protect them from diseases and stress.



Keep your roses free of mites environmental friendly

DANISARABA® 20 SC

Mites are the main pest in the ornamental market. The control of mites is difficult as mites have a highly active reproductive system. Mites can cause damage to plants throughout the year. Chrysal now offers a solution to control spider mites in roses and carnations, DANISARABA® 20 SC. It prevents utilization of energy by cell, thus leading to paralysis and death. It is effective on all life stages of mites and has a long residue effect. And even better, it is also environmental friendly. Keeping our beautiful nature in mind.

Usage

Apply at the first sign of mites and before the build-up of heavy pressure. It is important to ensure good coverage

Effects & benefits:

- For all roses and carnations.
- Effective on all life stages of mites.
- Important tool for IPM program.
- Quick knock down with long residue effect.
- Environmental friendly.

Extra info:

- Available in 500ml and 1 litre bottle and 5 litre can.
- 1 Litre per Ha (1ml/L).
- Allow for 14 - 21 days between applications.
- Registered in Colombia, Ecuador and Kenya. Contact your local salesperson for availability.



<https://www.chrysal.com/products/danisaraba>

of the target crop. Always do rotation spray program with different mode of action to reduce resistance development. Mites may maintain their original fresh colour and may not fall off until 5-7 days after application.

Spider mites

Spider mites are members of the Acari (Mites) family Tetranychidae that are mostly found living on the undersides of plant leaves. They are small pest of less than 1mm in size with one female capable of laying up to 20 eggs a day and can live for 2-4 weeks laying hundreds of eggs. Spider mites are an economically important plant feeding pest in the horticulture industry. They cause damage by sucking sap from the leaves and severe infestation may render the crops unsellable. There are about 1200 species of Spider mites with the two spotted red spider mite (*Tetranychus urticae*) being the most common in ornamental plants.

Life cycle

The life cycle of Spider mites is influenced by climate with hot and dry conditions being favourable for reproduction and development. The rate of Mites production accelerates at optimum temperatures and as a result allows them to become quickly resistant to pesticides.

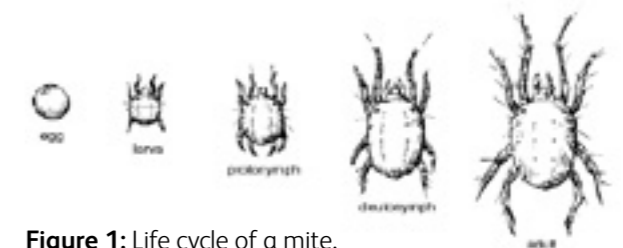


Figure 1: Life cycle of a mite.

Temperature	No. of days to complete life cycle
20°C	17 days
25°C	14 days
30°C	7 days

Table 1: Effects of temperature on life cycle of Spider Mites.

Several methods of managing the pest are available to the grower. Cultural, Biological and Chemical control are the methods used to manage the pest. Use of predatory mites such as *Phytoseiulus persimilis* and *Neoseiulus californicus* has become common with many growers. As such, when choosing a Miticide to spray, it is always important to consider compatibility. Cyflumetofen, the active ingredient in Danisaraba® is a novel acaricide developed by OAT agro Co ltd. The mode of action of Cyflumetofen is by inhibiting mitochondria complex II electron transport.



Post-harvest treatment

From the moment they're harvested, flowers and plants start to lose their vitality. Our post-harvest solutions boost quality, reduce waste and improve the opening of buds. That way, they stay fresh for longer!



Prevent ethylene damage and dropping of buds

Chrysal AVB

is a post-harvest conditioner for ethylene sensitive flowers, such as carnations, lilies and Alstroemeria. The effect is improved vase life, a diminished dropping of blooms, leaves and buds and an improved bud opening.

Flower types:

- Carnations, lilies and other ethylene sensitive flowers.

Effects & benefits:

- Protects against ethylene damage and increases vase life.
- Prevents premature shrinking and dropping of buds, leaves and blooms.
- Reduces flower wastage and prolongs sales period.
- Can be used up to 3 days, especially when mixed with Chrysal AVB Booster.
- In combination with Chrysal BVB or SVB, it maintains leaf quality and guarantees better flower development.

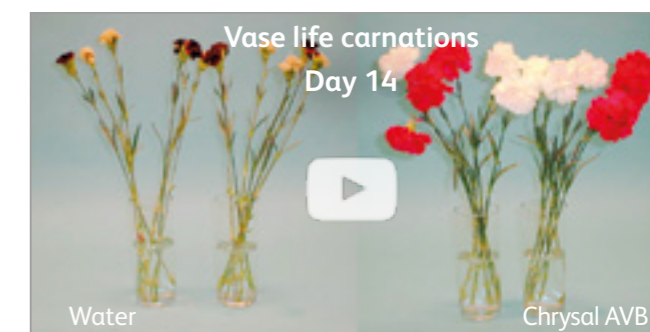
Extra info:

- Contains a tracer for dosing control.
- Available in 1 litre bottles and 5 litre cans. (incl. sachets to neutralise the silver in the residual solution).
- Can be dosed automatically. Correct dosing is vital for the quality of flowers. It also saves water, energy and costs.



<https://www.chrysal.com/products/chrysal-avb>

Test



Chrysal AVB Booster

improves the performance of the post-harvest ethylene treatment Chrysal AVB. It stimulates the water and AVB uptake. This is especially effective for flowers like carnations and Dendrobium.

Flower types:

- Carnations, lilies and other ethylene sensitive flowers.

Extra info:

- Available in 1 litre bottles and 5 litre cans.
- Can be dosed automatically. Correct dosing is vital for the quality of flowers. It also saves water, energy and costs.
- Chrysal AVB Booster is used only in combination with Chrysal AVB.



https://www.chrysal.com/sites/default/files/PS%20Chrysal%20AVB%20Booster%20EN_v1601.pdf



Prevent leaf yellowing and extend vase life

Chrysal BVB

helps with post-harvest problems for bulb flowers including lily and iris, such as sub-optimal vase life and leaf yellowing. Chrysal BVB extends the vase life of flowers considerably through improved bud opening (especially of iris), stem and flower quality.

Flower types:

- Bulb flowers such as Iris, Lilium, Anemone, Nerine and Alstroemeria.

Effects & benefits:

- Improves the quality of flowers and leaves. Keeps the leaves firm and green and prevents leaf yellowing.
- Stimulates a full bud opening of the flowers. Prolongs the vase life considerably.

Extra info:

- Contains a tracer to monitor dosage.
- Available in 1 litre bottle and 5 litre can.
- Can be dosed automatically.

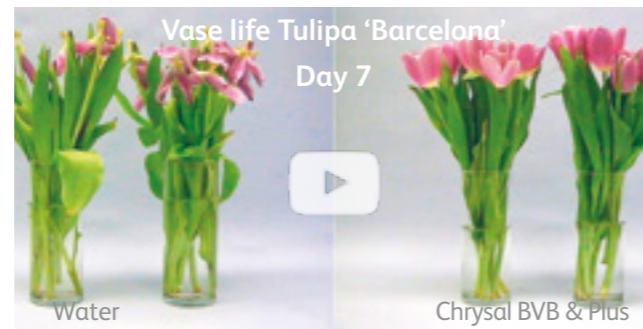


<https://www.chrysal.com/products/chrysal-bvb>

Chrysal BVB & Plus

offers the same benefits as BVB, developed specifically for tulips.

Test



Flower types:

- Tulipa.

Effects & benefits:

- Similar to Chrysal BVB, except it also reduces stem elongation and bending in tulips.

Extra info:

- Contains a tracer to monitor dosage.
- Available in 1 litre bottle and 5 litre can.
- Can be dosed automatically.



<https://www.chrysal.com/products/chrysal-bvb-plus>

Suppress bacterial growth in vase water

Chrysal CVBN

is a conditioner for cut flowers to be used by growers, bouquet makers or florists. It is an easy-to-use stable tablet that dissolves quickly and clearly in water. Chrysal CVBN is more effective against bacteria than any other chlorine product. It also neutralises the

Flower types:

- Gerbera, germini and mixed bouquets with daffodils.

Effects & benefits:

- Reduces flower waste and water consumption.
- Neutralises the harmful Narcissus slime in mixed bouquets with daffodils.
- Dissolves quickly and clearly in water.

Extra info:

- Available in an easy to dose dispenser containing 400 tablets and pots of 800 and 3,200 tablets.
- Can be dosed automatically with the Chrysal Drop 'n Go, a user-friendly machine which saves time and labour costs, with flexible dosing possibility of multiple tablets per bucket.



<https://www.chrysal.com/products/chrysal-cvbn>

damaging effect of daffodil slime in mixed bouquets.

Test



Common problems

What is stem elongation and how to avoid it?

The growing of the tulip stems can only be prevented when growers use a post-harvest treatment product. Chrysal has a product to prevent this tulip elongation: Chrysal BVB & Plus. It also enhances the vase life and prevents the leaves from yellowing.

<https://www.chrysal.com/tips/what-stem-elongation-and-how-avoid-it>

Improve flower development of potted plants

Chrysal Ethylene Buster®

is a post-harvest product for potted plants, such as orchids. Ethylene damage is a major cause of waste of potted plants and can occur during

long and dark transport. The product should be used in an airtight environment at the beginning of the normal storage or transportation period. This helps to improve shelf life and prevents dropping of buds.

Plant types:

- Ethylene sensitive potted plants (e.g. Cymbidium, Dendrobium, Dianthus, Phalaenopsis, Schlumbergera).

Effects & benefits:

- Blocks ethylene receptors, thus protecting against internally as well as externally produced ethylene.
- Reduces wastage and extends the distribution and sales period.
- Prevents premature shrinking and dropping of buds, leaves and blooms.

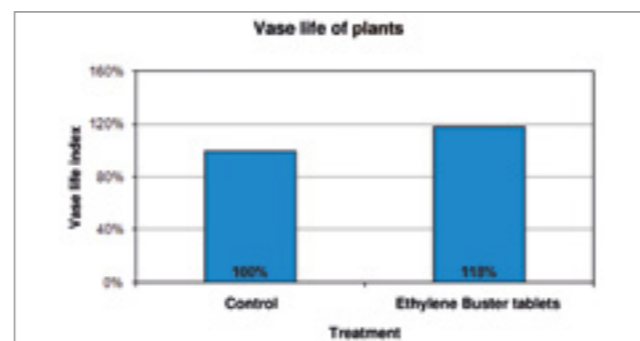
Extra info:

- Chrysal Ethylene Buster® is available as tablets or sachets.
- Available in a strip of 10 tablets, activator kit included (use 1 tablet for 10 m²), or box with 4 x 250 sachets.
- Chrysal Ethylene Buster® Sheets are available in Colombia. Contact your local salesperson.



<https://www.chrysal.com/products/chrysal-ethylene-buster>

Test



Keep your Hydrangeas in optimal condition during transport

Chrysal FreshLiner

is a modified humidity packaging that can be used for long distance transport by growers or international transport companies. The use of the Chrysal FreshLiner is easy, convenient and without 'free' water.

The boxes remain dry, clean and sturdy during transportation. Also the transport weight will be reduced and therefore costs, as no need to add individual water carriers on the stem ends. But most important: transporting the Hydrangeas without the 'free water' reduces the risk of Botrytis resulting in fresher flowers and firmer leaves on arrival.

Flower types:

- Hydrangea.

Effects & benefits:

- Keeps flowers fresh during transport.
- No water inside the box, less risk of Botrytis.
- Less handling, less damage, less labour with absence of water bag.
- Reduces water loss from flowers.

Extra info:

- Size of the bag (wxhxd):
Fresliner 500: 1.000 x 500 x 200 mm.
Fresliner 750: 1.000 x 750 x 200 mm.
Fresliner 1100: 1.200 x 1.100 x 230 mm.



<https://www.chrysal.com/products/chrysal-freshliner>

Chrysal HVB

stimulates water absorption, hydrating cut hydrangeas perfectly after harvesting. Prolonging the freshness throughout support and at the customers home. Treat your hydrangeas with Chrysal HVB before shipping them in Chrysal FreshLiner. They arrive in perfect condition!

Flower types:

- Hydrangea.

Effects & benefits:

- Hydrangeas arrive in perfect condition.
- Prolongs vase life.
- Lowers the pH of the water.

Extra info:

- Available in 1 litre bottle and 4 litre and 20 litre can.
- Can be dosed manually or automatically.
- Contains Aluminum Sulphate.

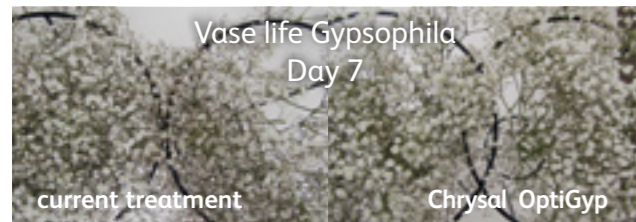


Keep your Gypsophila beautiful and fresh longer

Chrysal OptiGyp

is a unique all-in-one solution to enhance the brightness and whiteness for flowers; and is especially designed for Gypsophila. It provides all the necessary ingredients for an increased percentage of opening of the flowers, and keeps them beautiful and fresh up to 20 days.

Test



Flower types:

- Gypsophila.

Effects & benefits:

- All-in-one solution for Gypsophila.
- Enhances the brightness and whiteness.
- Prolongs vase life up to 20 days.

Extra info:

- For max. effect we recommend Chrysal Gyp Mix; a combination of OptiGyp, AVB and RVB Clear.
- Available in 25 kg. bags.
- Contact your local salesperson for availability.



Chrysal GVB

helps to improve the flower opening, lowers the pH of the water and maintains a good quality of flowers, stems and leaves. Chrysal GVB is part of the Chrysal Gyp Program and can be used after a treatment with Chrysal AVB, which gives Gypsophila a maximum protection against ethylene damage and reduces flower wastage.

Flower types:

- Gypsophila.

Effects & benefits:

- Maintains a good quality of flowers, stems and leaves.
- Reduces flower wastage.
- Lowers the pH of the water.

Extra info:

- Available in 25 litre can.
- Can be dosed both manually and automatically.
- Contact your local salesperson for availability.



Stimulate water uptake and improve quality

Chrysal OVB

is a hydrating solution for summer flowers. It stimulates water uptake by the flower. This will encourage the flowers to open and stay fresher longer. Sugar can be added to Chrysal OVB to encourage immature buds to flower. It improves the colour and size of the Gypsophila.

Flower types:

- Gypsophila and other summer flowers.

Effects & benefits:

- Stimulates water uptake and improves the quality of flowers and leaves.
- Reduces flower wastage and prolongs distribution and sales period.
- Flowers stay fresher longer.

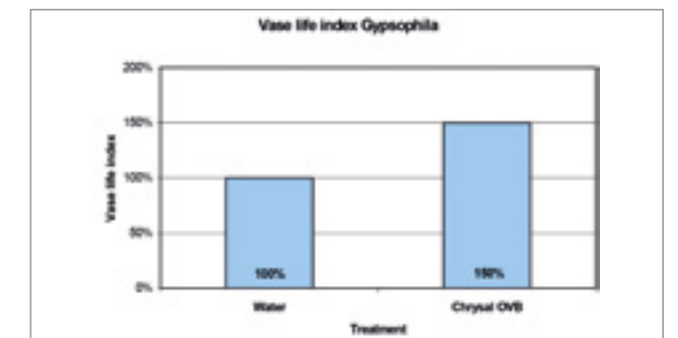
Extra info:

- Available in 5 litre can.
- Can be dosed automatically.
- Contact your local salesperson for availability.



Chrysal OVB is recommended for use by growers.

Test



Stimulate water uptake and improve quality

Chrysal RVB Clear intensive

is a clear universal hydrating treatment especially for roses as well as a wide range of other flowers. Chrysal RVB Clear Intensive stimulates the water uptake, thus preventing bent-neck and improving the flower development and leaf quality. It balances the pH of all water types. Chrysal RVB Clear Intensive is recommended for use by growers.

Flower types:

- Roses, and a wide range of summer flowers.

Effects & benefits:

- Stimulates water uptake thus preventing 'bent-neck', a common problem with roses.
- Lowers the pH of the water.
- Maintains the quality of flowers and prolongs the vase life.
- Mixes clearly and without odour in water.
- Free of Aluminium Sulphate, therefore less risk of leaf scorching and leaf drop- enabling a longer treatment time in the solution.

Extra info:

- Available in 5, 10, 25, 200 and 1,000 litre cans. Colombia and Ecuador: 4 litre and 20 litre cans.
- Also available: RVB Clear Soft Water, to be used in case of reversed osmosis water or very soft water.
- Can be dosed automatically.



<https://www.chrysal.com/products/chrysal-rvb-clear-intensive>

Test



Chrysal RVB

is an all-purpose hydrating solution containing Aluminium Sulphate. It is suitable for a wide variety of cut flowers, working especially well on roses, Bouvardia and Hydrangea. It flocculates hardness and organic material in water, thus reducing vascular plugging. Like Chrysal RVB Clear, it increases the water uptake which improves the quality of the blooms considerably.

Flower types:

- Roses, Bouvardia, Hydrangea.

Effects & benefits:

- Similar to Chrysal RVB Clear, except it contains Aluminium Sulphate which flocculates hardness and organic material in water.

Extra info:

- Available in 1 litre bottles, 4 litre and 20 litre cans and 60 litre and 200 litre drums.
- Check your local salesperson for availability.
- Can be dosed automatically.



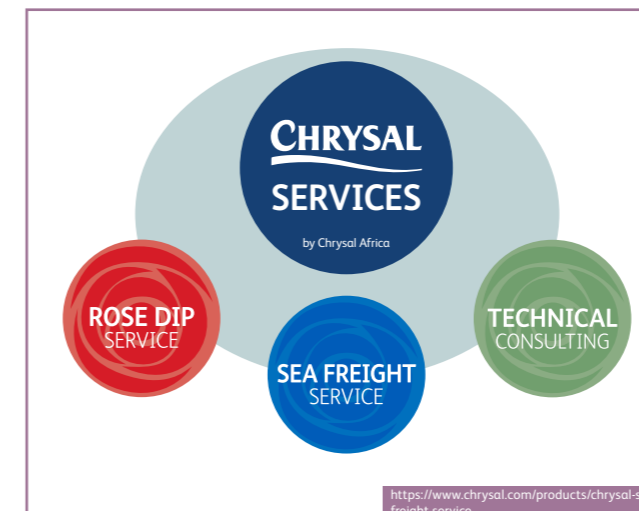
<https://www.chrysal.com/products/chrysal-rvb>

For better quality flowers and to increase profit

Chrysal Services: Rose Dip, Sea Freight and Long Storage Services

A unique Post-harvest and service concept that keeps flowers fresh and controls Botrytis during sea freight and long storage. This results in the opportunity for the farms and customers to use sea-freight over air freight, with a major decrease in carbon-footprint in logistics. The impact of that transition is up to 92% CO2 reduction on transportation from Kenya to the Netherlands. With the long-storage concept, clients can decrease the rejection rate of cut flowers to the market. Another opportunity is to time the market better, thus reducing overload and with that a more efficient supply chain.

Besides the protection against Botrytis and a better colour it includes an anti-ethylene treatment and Chrysal FreshLiner to help stabilize the climate in the box. An accurate data reporting service is also provided for all parties involved. Flowers are monitored by Chrysal Technical Assistants throughout the chain from harvesting until storage or dispatching the packed boxes in the container.



<https://www.chrysal.com/products/chrysal-sea-freight-service>



Common problems

What is bent-neck in roses and how can you avoid it?

Premature harvesting is the core problem of bent-neck in roses. The stem right under the bud is not strong enough to carry the weight of the growing bud/flower. When the stem bends in this way, the vascular bundles are pinched shut and the flower's water supply is cut off.

What can you do to avoid bent-neck (Post-harvest phase)?

- Harvest the roses at the appropriate level of maturity.
- Cut at least 5 cm off the stem to remove blockages.
- Use Chrysal RVB and Chrysal RVB Clear at the grower level, immediately upon harvest.

<https://www.chrysal.com/tips/what-bent-neck-roses-and-how-can-you-avoid-it>

Prevent leaf yellowing and extend vase life

Chrysal SVB

stimulates the opening of the buds and prevents (premature) leaf yellowing.

Flower types:

- Lilium, Alstroemeria, Eryngium and Euphorbia fulgens.

Effects & benefits:

- Maintains the good quality of leaves and flowers. Prolongs vase life.
- Use in combination with Chrysal AVB for an optimal treatment of Lilium and Alstroemeria.

Extra info:

- Available in pots containing 250 tablets.
- Can be dosed automatically.



<https://www.chrysal.com/products/chrysal-svb>

Reducing the risk of Botrytis

Chrysal Videnti

is the only registered anti-Botrytis post-harvest treatment in Colombia and The Netherlands (Vident) reducing the risk of Botrytis. It is low in toxicity but highly effective.

The liquid mixes quickly and is safe for the workers in the pack hall after its application. Videnti can be mixed with other products like Chrysal Viva and Chrysal Dip & Wash to improve the effect. The roses can be dipped and sprayed.

Flower types:

- Rose.

Effects & benefits:

- The only registered anti-Botrytis post-harvest treatment.
- Highly effective.
- Safe product to use.

Extra info:

- Available in 1 litre bottle in Colombia and the Netherlands.



For colour retention and spike induction

Chrysal Viva

is widely applicable for a lot of different crops. Chrysal Viva can be used as a post-harvest product to enhance the ornamental value of flowers and buds. It prevents leaf yellowing and gives flowers more intense and brighter colours. With Phalaenopsis we recommend

Flower types:

- Widely applicable and can be used for many different crops.

Effects & benefits:

- Stimulates spike induction at Phalaenopsis.
- Ensures colour retention of flowers.
- Prevents leaf yellowing.

Extra info:

- Available in 1 litre bottle.
- Contact your local salesperson for availability.



<https://www.chrysal.com/tips/how-get-more-spikes-phalaenopsis>

to use Chrysal Viva as pre-harvest product to stimulate spike induction. Chrysal Viva is effective in use; simply spray the solution on leaves, buds and blooms. With cut flowers dipping the flowers is also possible (and very effective!). Only a small amount of the solution is needed for the desired results.

Chrysal Viva - flowers

Dosage	4	ml/l
1L concentrate is	250	liter RTU
Usage per plant	± 5	ml
1L RTU treats	± 200	plants
1L concentrate treats	± 50.000	plants

Chrysal Viva - plants

Dosage	8	ml/l
1L concentrate is	125	liter RTU
Usage per plant	± 5	ml
1L RTU treats	± 200	plants
1L concentrate treats	± 25.000	plants

Test





Conditioning

Flowers and potted plants need to be kept hydrated during transport and in-store display, and their buds and blooms managed correctly. Our conditioning products don't just enhance quality, they extend the sales period too.



Avoid dehydration and increase shelf life

Chrysal Aqua Pad

is an innovative product for potted plants that helps to reduce wastage during the retail phase and ensures longer lasting freshness and shelf life.

Plant types:

- Plants susceptible to dehydration issues, such as potted rose, Azalea, Cyclamen.

Effects & benefits:

- Increases sales, improves shelf life presentation with healthy looking plants.
- Prolongs plant life in store by up to 30% and reduces waste in total supply chain.
- Reduces the need to water plants in store.
- 100% compostable, so no leftover waste.

Extra info:

Wrapped Aqua Pad

- A wrapping holds the pad material together and prevents it from losing its shape if wetted, thus making it easier to apply. To be used by manual application.

Aqua Pad

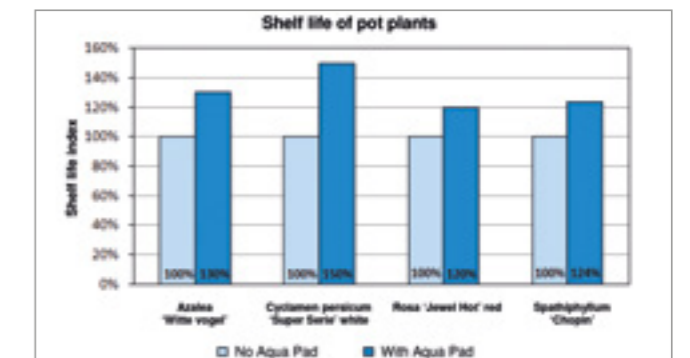
- Available in different sizes and shapes. To be used with automatic application.



<https://www.chrysal.com/products/chrysal-aqua-pad>

Aqua Pad is a wood fibre mat to be placed between the plant's grower pot and cover pot or gift bag. It creates a water reservoir for plants susceptible to dehydration issues, such as potted rose, Azalea and Cyclamen. Aqua Pad consists of 100% natural fibres and is therefore 100% compostable. With the Aqua Pad plants can be transported longer or packed earlier.

Test





Keep your plants protected from dehydration

Chrysal Aqua Sub

is a stable plant gel which creates a water reservoir. This helps to increase the ornamental value and shelf life of plants. It is a sustainable solution that reduces water use and the presence of 'free water' which can cause leakage. Plants treated with Chrysal Aqua Sub

require less frequent watering during transport and at the retail stage. It is easy and convenient to use with fast production possible with increased automation and injectors.

Instructions

Chrysal Aqua Sub needs to be injected manually or automatically into the substrate of the plant.

Plant types:

- Suitable for all plants susceptible to dehydration such as Azalea and Cyclamen.

Effects & benefits:

- Increases the ornamental value.
- Sustainable solution to reduce water.
- Easy and convenient in use.

Extra info:

- Can be applied manually or automatically.



Chrysal Aqua Sub is a sustainable solution to 'free water'.



<https://www.chrysal.com/products/chrysal-aqua-sub>

Manual dosing

1. Put the Aqua Sub into the backpack sprayer and bring under pressure.
2. Place the needle halfway into the 1st position in the substrate of the plant and dose.
3. Repeat as above in another position.
4. After use, thoroughly rinse back pack sprayer with water to avoid clogging.



Automatic dosing

1. Connect the Aqua Sub with the injection device.
2. Check the time needed for the right dosage.
3. Inject into two positions halfway into the substrate.
4. After use rinse the dosing system well with water to prevent clogging.



Keep your flowers fresh during transport

Chrysal Arrive Alive®

will hydrate flowers during transport for 3 to 5 days. It keeps flowers beautiful without the need for a bucket or vase with water and is therefore extremely user-friendly. Arrive Alive® gives you the advantages of shipping flowers horizontally without the risk of water spillage.

Chrysal Arrive Alive® Eco

wrap and bag are made from renewable resources and industrial compostable. The wrap is made of natural materials and cornbased PLA. The bag is made from a industrial compostable biopolymer and TUV Austria and OK Compost certified.

Test



Flower types:

- All flowers in an arrangement.

Effects & benefits:

- Keeps flowers beautiful without bucket or vase.
- Enables horizontal transport without leakage.
- User friendly.

Extra info:

- Arrive Alive® S-block is available in Medium (from 50 - 600 pieces) and Large (from 50 - 300 pieces).



Additional info:

- Sustainable solution for transport.
- The wrap is made of natural materials and the bag from a industrial compostable biopolymer.
- TUV Austria and OK Compost certified.
- Can be applied automatically.



Chrysal Arrive Alive® Eco is industrial compostable.



<https://www.chrysal.com/products/chrysal-arrive-alive-eco>



Keep your plants protected from dehydration

Chrysal Flower Gel

is an innovative (patent pending) gel to protect your beautiful bouquet of flowers, from packer all the way to the consumer, during transport and delivery. It is a bio-based gel made from water and clay.

Chrysal Flower Gel maintains the water source during transport and thus keeps flowers hydrated during courier and postal transportation. It is very user friendly and no 'free water' is needed which avoids spillages, damages and customer complaints.

Flower types:

- All flowers in an arrangement.

Effects & benefits:

- Keeps flowers beautiful during transport and delivery.
- User friendly.
- No 'free water' and thus no spillage.

Extra info:

- Check your local sales contact for availability.



Chrysal Flower Gel is a sustainable solution to 'free water'.



<https://www.chrysal.com/products/chrysal-flower-gel>



OUR CUSTOMERS ABOUT US

Willem van Maasdijk, founder of Farm Direct

“We work with only the best of the best. That’s why we choose Chrysal.”

<https://www.chrysal.com/news/farm-direct-cooperation-chrysal>

Condition flowers and reduce waste

Chrysal FlowPro 2

is, just like Chrysal Professional 2, especially developed for wholesalers, bouquet makers, florists and retailers. FlowPro 2 saves time and money as it is no longer necessary to cut the stems of the flowers before placing them in a container with water.

The conditioner contains just enough nutrients for the natural development of flowers whilst preventing flowers opening too soon. FlowPro 2 mixes clearly in water and reduces wastage by up to 50% compared with water alone. You can also use the conditioner for flowers that are cut.

Flower types:

- Suitable for all cut flowers except Anthurium.

Effects & benefits:

- Same benefits as Professional 2, additionally: cutting of flowers is no longer necessary (can also be used for flowers that are cut).

Extra info:

- Liquid: Available in a range of sizes from 1 litre to 200 litre.
- Available in Bag-in-box which contains up to 70% less plastic.
- Both manual and automatic dosing possible.



<https://www.chrysal.com/products/chrysal-flowpro-2>

Test



Water

Chrysal FlowPro 2

Condition flowers and reduce waste

Chrysal Professional 2

has been especially developed for use by wholesalers, bouquet makers, florists and

Flower types:

- Suitable for all cut flowers except Anthurium.

Effects & benefits:

- Reduces wastage by an average of 50% compared with water alone.
- A longer distribution and sales period possible.
- Keeps flowers beautiful up to 50% longer compared with water alone.
- Keeps stem and leaves firm and green.
- Save time and money by re-using the solution for up to 5 days.

Extra info:

- **Liquid:** Available in a range of sizes from 1 litre to 1000 litre.
- Dosage for optimal results: 5 ml per litre of water.
- Available in Bag-in-box which contains up to 70% less plastic.
- **Powder:** Available as T-Bag.
- Both manual and automatic dosing possible.



<https://www.chrysal.com/products/chrysal-professional-2-bag-box>

retailers in vases and buckets of all cut flowers. It contains just enough nutrients for the natural development of flowers whilst preventing flowers opening too soon. The improved formula stimulates water absorption and keeps flowers and leaves fresh and beautiful. The solution can be used for up to 5 days, reducing the necessity to change the water as frequently.

In addition, it reduces wastage by an average of 50% compared to water alone.

Test



Automatic application

Inline Dosing system

Continuous check and adjustment of dosage. Data will be stored automatically (traceability) and can be checked online in real-time and by Chrysal.



Our Bag-in-Box contains up to 70% less plastic compared to our blue jerrycans.

Improve shelf life and appearance

Chrysal LeafShine & Seal

reduces dehydration of potted plants such as Azalea, Chrysanthemum, and Rose. It gives leaves their natural gloss and keeps them dust-free which adds to the visual appearance of plants. It is an innovative solution which increases the time that plants can be on

Plant types:

- Potted plants and foliage such as Anthurium, Chrysanthemum, Azalea.

Effects & benefits:

- Healthier looking plants on display which require less watering.
- Reduces costs due to waste reduction.
- Adds a natural gloss to leaves of plants, cut flowers and foliage.

Extra info:

- Can be combined with Aqua Pad to further increase the shelf life.
- Available in 1, 5 and 200 litre.
- Can be applied automatically.



<https://www.chrysal.com/products/chrysal-leafshine-seal>

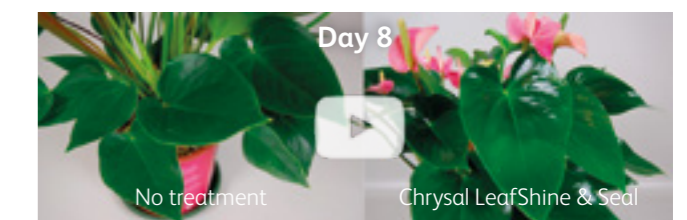
display in stores without watering and therefore reduces waste.

Instruction

Concentrate with tap water as follows

Dosage	SHINE effect	SEAL effect
1:20	High gloss	Plants with high evaporation (e.g. Hydrangea)
1:40	Gloss	Most plants
1:100	Silk gloss	Not advised

Test



Automatic application

Spray Tunnel

Use a spray tunnel for a good total spray of the leaves and best anti-transpirant effect. Enables reuse of LeafShine & Seal which saves cost.





Arrangement and design

For the most beautiful creations, whether in vases, pots or floral foam, you want to keep the flowers, foliage and plants fresh and hydrated at all times. We have different products which enhance colours, reduce evaporation and improve the opening of buds.



Maintains freshness and colours

Chrysal Glory

provides a shield to all cut flowers, especially those without a water source, such as wedding bouquets and corsages. It not only enhances colours, but also reduces evaporation and maintains leaf colour.

Flower types:

- All cut flowers and foliage.

Effects & benefits:

- Keeps flowers fresh, enhances colours and maintains leaf colour.
- For fresh and vibrant designs.
- Odourless and leaves no drops or stains.

Extra info:

- Available in 500 ml trigger bottles and 5 litre refills.
- Water-based product without propellant.



Environmentally friendly spray. No propellant gas.



<https://www.chrysal.com/products/chrysal-professional-glory>

Chrysal Silk and Dried Flower Cleaner

cleans and freshens silk, fabric and dried plants and flowers. It makes dust and dirt invisible and restores lustre.

Flower types:

- Silk and dried flowers.

Effects & benefits:

- Makes dust and dirt invisible and restores lustre.
- Water based, odourless and stainless.

Extra info:

- Available in 500ml aerosols.



<https://www.chrysal.com/products/chrysal-silk-and-dried-flower-cleaner>

For natural shine and less evaporation

Chrysal Leafshine aerosol

adds an instant natural gloss to leaves of plants and cut foliage in floral designs. It removes water spots and calcium deposits and gives a protective shiny layer which keeps dust away.

Plant types:

- All foliage and plants.

Effects & benefits:

- Adds instant natural gloss which can last up to one month.
- Prevents dust from settling and reduces evaporation of water by leaves.
- Easy to use spray dries quickly without the need for wiping.

Extra info:

- Available in 250, 600 and 750 ml aerosols.



<https://www.chrysal.com/products/chrysal-leafshine-aerosol>

Furthermore, it reduces evaporation which will prolong the lifetime of the cut foliage.

Test



Keep your designs in optimal condition

Chrysal Professional 3

is especially suitable for flower arrangements in vases and in floral foam, keeping the flowers in optimal condition. It can also be used to stimulate bud opening of immature flowers, e.g. carnations. Available in powder and liquid form.

Flower types:

- All cut flowers for arrangements in vases, aqua's and floral foam.

Effects & benefits:

- Keeps flowers in optimum condition and improves flower opening.
- Keeps flowers beautiful longer versus water alone.
- Mixes clearly and without odour in water.

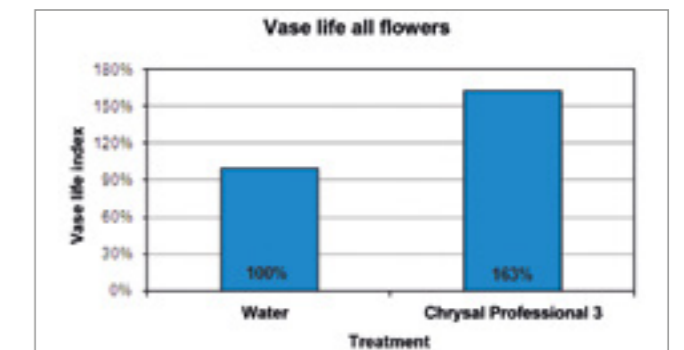
Extra info:

- Liquid: Available in 10 litre Bag-in-box.
- Dosage for optimal results: 10 ml per litre of water.
- Can be dosed automatically.
- Powder: Available in 2.5, 5 and 15 kg buckets.
- Dosage for optimal results: 10 g per litre of water.



<https://www.chrysal.com/products/chrysal-professional-3-1>

Test



Our Bag-in-Box contains up to 70% less plastic compared to our blue jerrycans.



Flower food

Quality doesn't stop in the shop! We offer different kinds of flower food that help increase vase life by up to 60% compared to water alone. Flower food stimulates the optimal development of buds and blooms, nurturing beauty for as long as possible.



Our sustainable sachets



With our sustainable packaging we contribute to a circular economy, in which we not only use less plastic, but the plastic we use can also be re-used, recycled or composted. Our sustainable

packaging contains 99% bio based flower food. With bio based flower food we increase the use of renewable biological sources, without compromising our quality.

Chrysal Paper sachet

- has a 100% recyclable packaging (made from TCF pulp and a water based coating).

Flower types:

- All cut flowers.

Effects & benefits:

- Reduces the use of plastic.
- Contains our 99% bio based flower food.
- Available in 1 litre powder sachets (in boxes of 500 and 1,000 sachets).
- 0.5 litre powder sachets (in boxes of 2,000 sachets).
- Check your local salesperson for availability.



<https://www.chrysal.com/products/chrysal-paper-sachet>

Chrysal Compostable sachet

- has a 100% home compostable packaging (made from cellulose + sugar cane PLA).

Flower types:

- All cut flowers.

Effects & benefits:

- DIN CERTCO certified.
- Contains our 99% bio based flower food.
- Available in 1 litre powder sachets (in boxes of 500 and 1,000 sachets).
- Check your local salesperson for availability.



<https://www.chrysal.com/products/chrysal-compostable-sachet>

Test



Our sustainable packaging contains 99% bio based flower food.

Chrysal Recyclable sachet

- has a 100% recyclable packaging (made from fully recyclable materials (PP)).

Flower types:

- All cut flowers.

Effects & benefits:

- Contains our 99% bio based flower food.
- Available in 1 litre powder sachets (in boxes of 1,000 sachets).

Now also available as a liquid sachet!

NEW!



<https://www.chrysal.com/products/chrysal-recyclable-plastic-sachet>

Provide extra days of flower enjoyment



Chrysal Supreme Universal

ensures your customers can enjoy the flowers up to 60% longer compared to the use of water alone. It mixes easily and clearly in water and is odourless, provides all the necessary ingredients for full development of buds and blooms. Accurate dosing is essential for maximum satisfaction.

Flower types:

- All cut flowers.

Effects & benefits:

- Extends the vase life of flowers by up to 60% compared to the use of water alone.
- Stimulates the bud and flower development, keeps leaves and stems firm and green.
- Allows a vase life guarantee of over 8 days.

Extra info:

- **Liquid:** 0.5 litre sticks are available in range of sizes. 1 litre sticks are available in range of sizes.
- **Powder:** 0.5 litre powder sachets are available in range of sizes (single and on string). 1 litre powder sachets are available in range of sizes (single and on string).



<https://www.chrysal.com/products/chrysal-supreme-flower-food>

Test



Chrysal Liquid Sachet On String

is a new and unique concept. The liquid sachet can be automatically applied by a Chrysal Liquid Binder which reduces manual labor and thus costs. It contains our Chrysal Supreme Universal.

Flower types:

- All cut flowers.

Effects & benefits:

- Automatic application reduces labor and costs.
- Keeps flowers beautiful up to 60% longer.
- Allows a vase life guarantee of over 8 days.
- Liquid 0.5 litre and 1 litre sachets are available (single and on string).
- Can be automatically applied by a Chrysal Liquid Binder.



<https://www.chrysal.com/products/chrysal-liquid-sachet-string>

Chrysal Better Bloom

is especially developed for florists with all the needed nutrients to keep your amazing floral designs fresher and more beautiful. Available in 5 colours, which will fit your bouquet perfectly.

Chrysal Consumer Bottle

makes it easy to top-up with Chrysal flower food

Flower types:

- All cut flowers.

Effects & benefits:

- Especially developed for florists.
- Stimulates the bud and flower development, keeps leaves and stems firm and green.
- Keeps floral designs fresher and more beautiful.

Extra info:

- **Liquid:** availability same as Supreme.
- **Powder:** availability same as Supreme.



<https://www.chrysal.com/products/chrysal-better-bloom-flower-food>

to keep your flowers beautiful even longer. It contains our Chrysal Universal formula.

Chrysal Fairtrade

contains 79.4% Fairtrade sugar and is available as Chrysal Universal Fairtrade.

Flower types:

- All cut flowers.

Effects & benefits:

- Especially made for top-up.
- Keeps flowers beautiful up to 60% longer.
- Available in a 250 ml bottle.



<https://www.chrysal.com/products/chrysal-clear-consumer-bottle>

Flower types:

- All cut flowers.

Effects & benefits:

- Clear universal flower food with the Fairtrade Certification Mark, contains Fairtrade sugars.
- Keeps flowers beautiful up to 60% longer.
- Available in boxes of 1,000 liquid sticks for 1 litre of water.



<https://www.chrysal.com/products/chrysal-clear-fairtrade>



Create your own flower food sachet

Chrysal Customised sachet

makes it possible for you to have your own branded flower food sachets. This gives you, as a florist, the opportunity to really distinguish yourself from the competition.

Creating your design couldn't be simpler with our online tool. As an extra service we can make your design for you. The Customised sachet contains our well-known Chrysal Universal powder enabling customers to enjoy

their flowers by up to 60% longer compared to the use of water alone.

How to

Our on-line design tool allows you to both create and order your Chrysal Customised sachets. Contact design@chrysal.com for more information.

Flower types:

- All cut flowers.

Effects & benefits:

- Your own customised flower food sachet.
- Keeps flowers beautiful up to 60% longer.

Extra info:

- Available in 1 litre powder sachets. 1,000 sachets per carton (min. 2,000 sachets per order).
- There is a 4-week cycle whereby you can send your order and artwork.



<https://www.chrysal.com/products/customised-sachets>

What are the effects of under- and overdosing flower food?



Over- or underdosing with flower food will cause a less than optimum result. The greater the deviation, the more disappointing the result will be, sometimes even negative. It is not good for the general condition and lowers the life expectancy. Underdosing is most critical and shortens the vase life the most.

<https://www.chrysal.com/tips/what-are-effects-under-and-overdosing-flower-food>

Add extra value to your flowers

Chrysal Specialties

are developed for the needs of specific bouquet types and cut flowers such as Lilies, Tulips and bulb flowers.

Chrysal Supreme Rosa

is suitable for every rose variety. It contains sufficient food for the full development of roses and enhances performance in relation to bud opening, colours and size of blooms.

Test



Flower types:

- Tulipa, Bulbosus, Lilium & Alstroemeria, Syringa, Bouvardia, Narcissus.

Effects & benefits:

- Extends the vase life of flowers by up to 60% compared to the use of water alone.
- Developed for the needs of the specific crop.

Extra info:

- Available in 1 litre powder sachets in boxes of 1,000 to 5,000 sachets (single and on string).
- Bouvardia: 0.5 litre powder sachets are available in boxes of 5,000 sachets (string).



Flower types:

- All rose varieties.

Effects & benefits:

- Extends the vase life of roses by up to 60% versus water alone.
- Maintains a good leaf quality and prevents 'bent-neck'.
- Stimulates full development of blooms.
- Allows a vase life guarantee of over 8 days.

Extra info:

- Powder: 0.5 litre powder sachets are available in range of sizes (single and on string). 1 litre powder sachets are available in range of sizes (single and on string).
- Liquid: 0.5 litre sticks are available in range of sizes (single). 0.5 and 1 litre sachets are available on string.



<https://www.chrysal.com/products/chrysal-supreme-rosa>



Applications

Automatic application helps with the efficient use of Chrysal products, save time, energy and costs. Check with your local representative for a customer specific solution.



Saving time, energy and costs

Chrysal Dosing Unit

Correct dosing is vital for the quality of flowers. It also helps with the efficient use of Chrysal products, saves water, energy and costs.

Effects & benefits:

- Saves water, energy, time and (labour) costs.
- Powered by water pressure, no electricity required.

Extra info:

- Available in different models varying in dosing range.
- Check with your local representative for a customer specific solution or visit www.chrysal.com



OUR CUSTOMERS ABOUT US

Helen Chambers
Founder & Director Evolve Flowers Ltd
& British Flowers Direct

“It made perfect sense to supply our florist customers with Chrysal Products to give our British flowers the best treatment possible and be sustainable too.”

<https://www.chrysal.com/en-gb?q=node/add>

	Notes	POST-HARVEST TREATMENT (AT THE GROWER)										CONDITIONING (TRANSPORT & RETAIL)			ARRAN- GE- MENTS	FLOWER FOOD (AT HOME)					
		AVB (10)	BVB	BVB+	CVBN (11)	Ethylene Buster	OVB	RVB / RVB Clear Intensive / Grow 20	SVB	Professional 2 / Grow 30	Professional 3 / Grow 40	Viva (13)	Professional 2 / T-Bag / FlowPro 2	Professional 3 / FlowPro 3	CVBN / Solution Initial	Professional 3 / Glory	Universal	Bulb flowers	Lilium & Astromeria	Rose	Tulipa
Flower list																					
A																					
Acacia (Mimosa)										X					X		X				
Achillea filipendulina	2				X		X					X			X		X				
Achillea millefolium							X					X			X		X				
Aconitum napellus	5	X			X		X					X			X		X				
Ageratum	2				X		X					X			X		X				
Agapanthus	5	X			X		X					X			X		X				
Alchemilla mollis	2				X	X	X					X			X		X				
Allium	2				X		X					X			X		X				
Alpina	2				X		X					X			X		X				
Alstroemeria	3	X	X				X					X			X		X				X
Amaranthus	2				X		X					X			X		X				
Amarine			X		X							X			X		X				
Ammi majus	2				X		X					X			X		X				
Anaphalis	2				X		X					X			X		X				
Anemone hybride		X										X			X		X				X
Anethum graveolens	2				X		X					X			X		X				
Anigozanthos	2				X		X					X			X		X				
Anthurium					X							X			X		X				
Antirrhinum	5	X			X		X				X				X		X				
Aquilegia	5	X			X		X					X			X		X				
Arum	2				X		X					X			X		X				
Asclepias tuberosa	5	X			X		X					X			X		X				
Aster	2				X		X					X			X		X				
Aster ericoides	2				X		X					X			X		X				
Aster Novi Belgi gr.							X					X			X		X				
Astilbe							X					X			X		X				
Astrantia major	2				X		X					X			X		X				
Azalea							X					X			X		X				
B																					
Banksia							X					X			X		X				
Bellis	2				X		X					X			X		X				
Blandfordia							X					X			X		X				
Boronia	2				X		X					X			X		X				
Bouvardia	1	X					X					X			X		X				
Brodiaea (Triteleia)	5	X			X		X					X			X		X				
Brassica										X		X			X		X				
Bupleurum	2				X		X					X			X		X				
C																					
Calendula	2				X		X					X			X		X				
Calla	2				X					X		X			X		X			X	
Callicarpa							X					X			X		X				
Callistephus	2				X		X					X			X		X				
Callistephus (Matsumoto)	2				X		X					X			X		X				
Campanula glomerata	5	X			X		X					X			X		X				
Campanula (other)					X		X					X			X		X				
Carthamus tinctorius							X					X			X		X				
Cattleya hybride		X										X			X		X				
Celosia argentea	2				X		X					X			X		X				
Centaura cyanus	2				X		X					X			X		X				
Centaura	2				X		X					X			X		X				
Centranthus	2				X		X					X			X		X				
Cestrum	5	X			X		X			X		X			X		X				
Chamelacium (waxflower)	1	X					X					X			X		X				
Cheiranthus	2				X		X					X			X		X				
Chelone obliqua	2				X		X					X			X		X				
Chrysanthemum							X				X				X		X		X		
Cirsium japonicum	2				X		X					X			X		X				
Clematis							X					X			X		X				
Convallaria majalis	2				X		X					X			X		X			X	
Cosmea	2				X		X					X			X		X				
Costus							X					X			X		X				
Cotinus							X					X			X		X				
Craspedia globosa	2				X		X					X			X		X				
Crococmia (Montbretia)	5	X			X		X					X			X		X				
Cyclamen	2				X		X					X			X		X				
Cymbidium					X		X				X				X		X				
Cynara	2				X		X					X			X		X				
D																					
Dahlia	5	X			X		X				X				X		X				
Daucus	1	X					X					X			X		X				X
Delphinium	5	X			X		X					X			X		X				
Dendrobium		X										X			X		X				
Dianthus barbatus	5	X			X		X					X			X		X				
Dianthus	5	X			X		X					X			X		X				
Dicentra spectabilis	5	X			X		X					X			X		X				
Digitalis	2				X		X					X			X		X				
Doronicum	2				X		X					X			X		X				
E																					
Echinops	2				X		X					X			X		X				
Eremurus	5	X			X		X					X			X		X				
Erica							X					X			X		X				
Eryngium alpinum								X				X			X		X				
Eucalyptus spp							X					X			X		X				
Eucharis	2				X		X					X			X		X				
Eucomis	2				X		X					X			X		X				
Eupatorium	2				X		X					X			X		X				
Euphorbia fulgens	9	X						X				X			X		X			X	
Euphorbia					X		X					X			X		X				
Eustoma (Lisianthus)	2									X		X			X		X				

Flower list	Notes	POST-HARVEST TREATMENT (AT THE GROWER)										CONDITIONING (TRANSPORT & RETAIL)			ARRAN- GE- MENTS	FLOWER FOOD (AT HOME)					
		AVB (10)	BVB	BVB+	CVBN (11)	Ethylene Buster	OVB	RVB / RVB Clear Intensive / Grow 20	SVB	Professional 2 / Grow 30	Professional 3 / Grow 40	Viva (13)	Professional 2 / T-Bag / FlowPro 2	Professional 3 / FlowPro 3	CVBN / Solution Initial	Professional 3 / Glory	Universal	Bulb flowers	Lilium & Astromeria	Rose	Tulipa
F																					
Foliage (cut)	2				X		X					X			X		X				
Forsythia												X			X		X				
Freesia	6	X										X			X		X				
Frittelaria	2				X		X					X			X		X				
G																					
Gaillardia	2				X		X					X			X		X				
Gallanthus nivalis	2				X		X					X			X		X				
Genista	2				X		X					X			X		X				
Gentiana					X		X				X				X		X				
Gerbera					X		X					X			X		X				
Glaucolus												X			X		X			X	
Globba					X							X			X		X				
Gloriosa	2				X		X					X			X		X				
Godetia	2				X		X					X			X		X				
Gomphrena	2				X		X					X			X		X				
Grammineae (grass)					X		X					X			X		X				
Gypsophila	4	X					X					X			X		X				
H																					
Hamamelis							X					X			X		X				
Helenium	2				X		X					X									



Flower list	Notes	POST-HARVEST TREATMENT (AT THE GROWER)										CONDITIONING (TRANSPORT & RETAIL)			FLOWER FOOD (AT HOME)						
		AVB (10)	BVB	BVB+	CVBN (11)	Ethylene Buster	OVB	RVB / RVB Clear Intensive / Grow 20	SVB	Professional 2 / Grow 30	Professional 3 / Grow 40	Viva (13)	Professional 2 / T-Bag / FlowPro 2	Professional 3 / FlowPro 3	CVBN / Solucion Inicial	Professional 3 / Glory	Universal	Bulb flowers	Lilium & Alstroemeria	Rose	Tulipa
Prunus (glandulosa/triloba)	2						X			X		X			X						
R																					
Ranunculus	2		X		X		X					X			X		X				
Reseda	2				X		X					X			X	X					
Rosa (Rose)							X				X				X				X		
Rudbeckia	2				X		X					X			X	X					
S																					
Salvia	2				X		X					X			X	X					
Sandersonia	2				X		X					X			X	X					
Sanguisorbia					X		X			X											
Saponaria	2				X		X					X			X	X					
Sarracenia	2				X		X					X			X	X					
Scabiosa	5	X			X		X		X			X			X	X					
Scilla					X		X					X			X	X					
Sedum	2				X		X					X			X	X					
Sidalcea	2				X		X					X			X	X					
Silene armeria	5	X			X		X					X			X	X					
Solidago	2				X		X					X			X	X					
Solidaster	2				X		X					X			X	X					
Stephanotis	2				X		X					X			X	X					
Strelitzia							X		X				X		X	X					
Symphoricarpos							X					X			X	X					
Syringa							X		X						X						
T																					
Tagetes	2				X		X					X			X	X					
Tanacetum Panthenium	2				X		X					X			X	X					
Tanacetum overig					X																
Thalictrum	2				X		X					X			X	X					
Thryptomene							X					X			X	X					
Trachelium	2				X		X					X			X	X					
Triteleia	2				X		X					X			X	X					
Tritonia	2				X		X					X			X	X					
Trollius	2				X		X					X			X	X					
Trycistis							X					X			X	X					
Tulipa			X									X			X						X
V																					
Vanda					X							X			X	X					
Vallota					X		X					X			X	X					
Verbascum	2				X		X					X			X	X					
Verbena	2				X		X					X			X	X					
Veronica	5	X					X					X			X	X					
Verticordia							X					X			X	X					
Viburnum	2						X		X			X			X						
Viola	2				X		X					X			X	X					
Vuykstekeara									X			X			X	X					
W																					
Waratah							X					X			X	X					
X																					
Xeranthemum	2				X		X					X			X						
Z																					
Zantedeschia	2				X				X			X			X	X					
Zinnia	2				X		X					X			X	X					

LEGEND FLOWER LIST	
1. Use AVB as post-harvest, then transfer to RVB/ RVB Clear Intensive / Grow 20.	7. Use BVB or SVB to prevent leaf yellowing, for longer vase life use BVB + AVB.
2. Choose one of the indicated Chrysal post-harvest treatments.	8. Use AVB or a combination of BVB with AVB.
3. Use AVB as post-harvest treatment, then transfer to BVB or SVB, or use a AVB+SVB or AVB+BVB.	9. Use AVB then transfer to SVB or use a combination of both solutions.
4. Use AVB as post-harvest treatment, then transfer to OVB or RVB clear + a min. of 40 gram of sugar per litre.	10. AVB can be mixed with AVB Booster or RVB clear.
5. Use AVB as post-harvest treatment, then transfer to CVBN, OVB or RVB (Clear).	11. Use CVBN in case of a short treatment time (<24 h) / Use RVB (Clear) in case of a longer treatment time (>24 h) or in case of a water uptake problem.
6. Use AVB as post-harvest treatment, then transfer to Professional 2.	12. For Chrysanthemum we also have special

CHRYSA Mixed bouquets	CONDITIONING (TRANSPORT & RETAIL)		FLOWER FOOD (AT HOME)				
	Professional 2 / T-Bag	CVBN	Universal	Bulb flowers	Lilium & Alstroemeria	Rose	Narcissus
Roses with gypsophila	X		X			X	
Roses with freesias	X		X			X	
Roses with lilies	X		X			X	
Roses with other flowers	X		X			X	
Mixed spring bouquet with Narcissus			X				X
Mixes spring bouquet with Hyacinthus (1)		X	X	X			
Mixed bouquet with bulb flowers (no roses & narcissus)	X		X	X			
Mixed bouquet with lilies & alstroemeria (no roses)	X			X	X		
Mixed bouquet with lilies, alstroemeria & roses	X		X			X	
Mixed bouquet with summer flowers	X		X				
Tulips and Matthiola (Stocks)	X		X	X			
Cut foliage for mixed bouquets (2)	X	X					

LEGEND MIXED BOUQUETS
 (1) Do not recut at retail level. Recut at consumer level.
 (2) Not usually supplied with cut flower
 X - Good alternative

When working with **Chrysal FlowPro 2** recutting stems is no longer necessary before placing the flowers in water. We advise to do a same scale test however with flowers before discontinuing recutting.

This flower list is an advice. We always suggest to do smale scale tests.

Potted plant list	GENERAL INFORMATION					POST-HARVEST TREATMENT CONDITIONING				LeafShine & Seal		CONDITIONING		ARRANGEMENTS	
	Flowering	Family	dehydration sensitive	Chill sensitive	Ethylene sensitivity	Fungus sensitive	Viva	Alesco (US Only)	Largo	Ethylene Buster	Seal	Shine & Contrast	Aqua Pad	Aqua Sub	LS Agarosol
Achillea millefolium	Y	Asteraceae			M		X								
Achimenes hybrids	Y	Gesmeriaceae		M	M										
Adiantum	N	Pteridaceae		M											
Aechmea	Y	Bromeliaceae	M	H	L							X	X		
Aeschynantes	Y	Gesneriaceae									X				
Allium (Bieslook)	Y	Alliaceae	M									X	X		
Alstroemeria	Y	Alstroemeriaceae			H		X		X						
Amaryllis	Y	Amaryllidaceae													
Anemone	Y	Ranunculaceae			M		X	X	X			X	X		
Antirrhinum (snap dragon)	Y	Plantaginaceae			M		X	X				X	X		
Anthurium	Y	Araceae	M	H	L		X			X	X	X	X	X	X
Areca	N	Areaceae	M	H	L						X				
Asparagus	Y	Asparagaceae	H		H		X		X			X	X		
Asplenium	N	Asplenaceae	M	H	L					X		X	X		
Aquilegia	Y	Ranunculales			M		X								
Aster	Y	Asteraceae	M	L	M		X			X					
Azalea	Y	Ericaceae	H	L	M		X	X	X	X	X	X	X		
B															
Basilicum (Ocimum)	N	Lamiaceae	H	M								X	X		
Beaucarnea (Nolina)	N	Asparagaceae		M	V						X	X	X	X	X
Begonia	Y	Begoniaceae	M	L	V	X	X			X	X	X	X		
Beloperone guttata	Y	Acanthaceae			H						X				
Bougainvillea *butiana	Y	Nyctaginaceae	H		V		X			X	X	X	X		
Brassia	Y	Orchidaceae	M	H	H				X		X	X	X	X	X
Brassica	Y	Brassicaceae	M	L	M	L				X	X				
Browallia speciosa	Y	Solanaceae			M	H									
Burrangera	Y	Orchidaceae	M	H	H				X		X	X	X	X	
C															
Calathea	Y	Marantaceae	H	H	L		X		X		X	X	X		
Calceolaria	Y	Calceolariaceae	M	L	H	X	X		X						
Calluna	Y	Ericaceae	H	L						X	X	X	X		
Calibrachoa	Y	Solanaceae			M		X			X					
Campanula	Y	Campanulaceae	M	L	H		X		X			X	X		
Catharanthus	Y	Apocynaceae													
Cattleya	Y	Orchidaceae	M	H	H				X		X	X	X	X	X
Capsicum	Y	Solanaceae	M		H				X			X	X		
Celosia	Y	Amaranthaceae	H	M						X		X	X		
Chamaecyparis	N	Cupressaceae	H	L						X	X	X	X		
Chamaedorea	N	Areaceae	M	H	L					X		X	X		X
Chlorophytum	Y	Asparagaceae	M	M	M					X	X				
Chrysanthemum	Y	Asteraceae	H	L			X			X		X	X		
Cineraria	Y	Asteraceae			M		X					X	X		
Cissus	N	Vitaceae													
Citrofortunella	Y	Rutaceae	M		V					X					
Clerodendrum	Y	Lamiaceae			H		X					X	X		
Codiaeum	N	Euphorbiaceae	M	H						X					
Colmanara	Y	Orchidaceae	M	H	V/H		X		X	X	X	X	X	X	
Cordyline	N	Asparagaceae	M	H						X					
Coriandrum	N	Apiaceae	M									X	X		
Crocus	Y	Iridaceae	M									X	X		
Crossandra	Y	Acanthaceae	M	M	H	X	X		X	X	X	X	X		
Cupressus	N	Cupressaceae	M			X				X		X	X		
Curcuma	Y	Zingiberaceae	H	H	V		X					X	X		
Cycas	N	Cycadaceae			V						X				X
Cyclamen	Y	Primulaceae	M	L	V	X			X			X	X		
Cymbidium	Y	Orchidaceae	L	V					X			X	X		
Cyperus	N	Cyperaceae	M									X	X		
D															
Dahlia	Y	Asteraceae	M	M	H		X	X				X	X		
Delphinium	Y	Ranunculaceae	H	H	H		X		X						
Dendrobium compactum	Y	Orchidaceae		H	M							X	X		
Dendrobium nobile	Y	Orchidaceae		H	H							X	X		
Dianthus	Y	Caryophyllaceae			H		X		X			X	X		
Dieffenbachia	N	Araceae	M	H	L					X	X				
Dille (Anethum)	N	Apiaceae	M									X	X		
Dipladenia	Y	Apocynaceae	M	M	M						X				
Dracaena	N	Agavaceae	M	H	V						X	X	X	X	
Dragon (Artemisia)	N	Asteraceae	M									X	X		
E															
Epiphyllum	Y	Cactaceae													
Epipremnum	N	Araceae									X				
Euphorbia hypericifolia	Y	Euphorbiaceae			M		X								
Poinsettia (Euphorbia pulcherrima)	Y	Euphorbiaceae	H	H	V	X	X		X			X	X		
Exacum	Y	Gentianaceae										X	X		
F															
Ficus	N	Moraceae	M	H	M		X				X				X
Fragaria	Y	Rosaceae	H	L								X	X		
Freesia	Y	Iridaceae			H		X		X						
Fuchsia hybrids	Y	Onagraceae	M		H		X		X			X	X		
G															
Gardenia	Y	Rubiaceae	M		H		X				X	X	X		
Gerbera	Y	Asteraceae	H	L	L	X				X		X	X		
Gloxinia	Y	Gesneriaceae	M	H	H	X	X		X						
Guzmania	N	Bromeliaceae	M	H	L							X	X		
H															
Hebe	Y	Plantaginaceae	H	L						X	X	X	X		
Hedera	N	Araliaceae	M	M	M					X	X	X	X		X
Helianthus	Y	Asteraceae	H	L	L					X	X	X	X		
Helleborus	Y	Ranunculaceae	H	L						X	X				X
Hibiscus rosa-sinensis	Y	Malvaceae	H	H	H		X		X	X	X	X	X		
Hippeastrum (Amaryllis)	Y	Amaryllidaceae													
Howea	N	Areaceae	M	H	L						X		X		
Hyaacinth	Y	Asparagaceae	M	L								X	X		
Hydrangea	Y	Hydrangeaceae	H	L	M	X	X		X	X	X	X	X	X	X

Potted plant list	GENERAL INFORMATION					POST-HARVEST TREATMENT CONDITIONING				LeafShine & Seal		CONDITIONING		ARRANGEMENTS	
	Flowering	Family	dehydration sensitive	Chill sensitive	Ethylene sensitivity	Fungus sensitive	Viva	Alesco (US Only)	Largo	Ethylene Buster	Seal	Shine & Contrast	Aqua Pad	Aqua Sub	LS Agarosol
I															
Impatiens 'New Guinea'	Y	Balsaminaceae	H	M	H	X				X			X	X	
Impatiens walleriana	Y	Balsaminaceae	H	M	M	X				X			X	X	
J															
Jasminium	Y	Oleaceae													
K															
Kalanchoe	Y	Crassulaceae			M	V	X			X			X	X	
Kohleria hybrids	N	Poaceae			M								X	X	
L															
Lantana	Y	Verbenaceae			M					X					
Lobelia	Y	Campanulaceae	H	L	M/H					X					
Lavandula	Y	Lamiaceae	H							X	X	X	X		
Lilium	Y	Liliaceae	M	L	H	X				X	X	X	X	X	
M															
Melissa	N	Lamiaceae	M										X	X	
Mentha	N	Lamiaceae											X	X	
Miltoniopsis	Y	Orchidaceae								H			X	X	
Monstera	N	Araceae					X					X			X
Muscari	Y	Asparagaceae													
N															
Narcissus	Y	Amaryllidaceae			L	M				X					
Nephrhtis	Y	Araceae			H					X	X				
Nephrolepis	N	Nephrolepidaceae	H	H	L					X	X		X	X	
O															
Oncidium	Y	Orchidaceae			H	V				X	X		X	X	
Olea	N	Oleaceae	M									X			
Origanum	N	Lamiaceae	M							X			X	X	
Oxalis	Y	Oxalidaceae													
P															
Pachira	N	Malvaceae			V										
Pelargonium (Geranium)	Y	Geraniaceae	H		H			X	X	X	X				
Pentstemon	Y	Rubiaceae			M					X					
Peperomia	N	Piperaceae													
Petroselinum	N	Apiaceae	M											X	X
Petunia	Y	Solanaceae	H	M	M	X				X	X	X	X	X	X
Phalaenopsis	Y	Orchidaceae	M	H	V/H				X*		X	X	X	X	X
Phlox paniculata	Y	Polemoniaceae			H					X					
Philodendron	N	Araceae	M	H	M					X					X
Phoenix	N	Araceae													X
Picea	N	Pinaceae	M	L								X	X	X	X
Pinus	N	Pinaceae	M	L								X	X	X	X
Platycodon	Y	Campanulaceae	M	L	M					X			X	X	
Poinsettia (Euphorbia pulcherrima)	Y	Euphorbiaceae	H	H	V	X				X	X		X	X	
Portulaca	N	Portulacaceae													
Primula	Y	Primulaceae	H		L							X	X	X	X
Pteris	N	Pteridaceae												X	X
R															
Radermachera	N	Bignoniaceae			M									X	X
Ranunculus	Y	Ranunculaceae					X							X	X
Rechsteineria cardinalis	Y	Gesneriaceae			M										
Rhaphidophora	N	Araceae												X	X
Rhaphidopsis/Schlumbergera/ Zygocactus	Y	Cactaceae			M	H	X			X					
Rhododendron	Y	Ericaceae										X	X		X
Rosa	Y	Rosaceae	H		M/H	X	X	X		X	X	X	X	X	X
Rosemarinus	N	Lamiaceae	M										X	X	
S															
Saintpaulia	Y	Gesneriaceae	M	H	M/H	X	X		X				X	X	
Salvia	N	Lamiaceae	M											X	X
Sanseveria	N	Agavaceae			H	L					X				
Schefflera	N	Araliaceae	M	H	H										



Follow us on:      

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Chrysal International BV complies with the requirements of the ETI Base Code.
Audited by MPS-ECAS; MPS no 801313/1.

