



active packaging

prolong the life of your food

reyfresh
&
reygreen

 **reyenvas**


GRUPO
**armando
alvarez**



reyfresh®

Reyenvas has more than a decade's experience in developing a range of active bags, sleeves and films under the **reyfresh®** brand. The main objective is to extend the shelf life of fruit and vegetables without altering the taste or aroma of the produce.

We have extensive experience in various different food sectors, which has allowed us to adapt our technology to the different formats demanded by each sector. The use of **reyfresh®** presents a multitude of benefits and competitive advantages to the fruit and vegetable supply chain.

HOW DOES IT WORK?

Certain fruits and vegetables (called climacteric) generate ethylene during the ripening process. Ethylene, in these cases behaves like a hormone of ripening and causes a faster ripening of the fruit. The more ethylene in the surrounding, the faster the ripening of the fruit and shorter its shelf life.

reyfresh® works through the absorption of a part of the ethylene that the fruit or vegetable emits during the ripening process. The absorption of ethylene in the environment surrounding the fruit results in the delaying of the ripening process and thus extends the life expectancy of the produce. Furthermore, the use of this technology maintains the correct hydration and freshness of the fruit during storage or transport.





WHERE DOES IT WORK?



There are some products such as strawberries, where despite not being climacteric, there are still improvements observed with the use of this technology. In this case, the most apt application is the use of Pallet Hoods for a modified atmosphere (**reyfresh-ATM**).



The modified atmosphere preservation technique consists of packaging food products in materials that partially prevent the diffusion of gases and modify the gaseous environment in order to reduce the rate of respiration, reduce microbial growth and delaying enzymatic spoilage with the aim of the purpose of extending the shelf life of the product.

For this application, Reyenvas offers a range of covers, with a relative permeability to gas exchange, which, after inoculating with CO₂, their objective is to maintain atmospheres with higher CO₂ concentration and lower O₂ concentration inside the covers. In this way, the respiration rate of the fruit is reduced, but also allows for the fruit to continue to breathe during storage.

FOOD CONTACT APPROVED

For the manufacture of this product range, a combination of inorganic additives are used, which are permanently maintained in the polymer structure and do not migrate with the passage of time. They are responsible for capturing ethylene. This guarantees that the film is inert with respect to the packaged fruit, not modifying at any time its organoleptic properties (color, aroma, flavor).

In addition, this molecule does not affect the food fitness of the packaging. This range of products has successfully passed the corresponding migration tests that the legislation of plastic materials in contact with foodstuffs marks.

**WE HAVE THE
CORRESPONDING FOOD CONTACT
APPROVAL CERTIFICATES.**

ADVANTAGES OF USE



REACH FARTHER DESTINATIONS

reyfresh® enables our customers to transport their fruit and vegetables to ever more distant destinations.



LONGER PRESERVATION

reyfresh® achieves longer shelf life for products, creating opportunities to extend the production season.



CONSERVATION OF QUALITY

reyfresh® ensures that the product reaches the end consumer in better condition.



INERT MATERIAL

reyfresh® uses inert additives in its composition, which do not migrate over time and therefore do not alter the organoleptic properties of the product.



REDUCTION OF WASTE

reyfresh® reduces waste by reducing spoilage, obtaining more efficient production lines which also result in significant savings with very perishable products.



WIDE RANGE OF FORMATS

reyfresh® presents this technology in bags of different sizes, pallet covers and films for boxes and crates.



CORRECT HYDRATION

reyfresh® manages to keep the fruit properly hydrated, preserving the product's colour and maintaining its weight.

PERFORATED BAGS

As can be seen in the **reyfresh**® product range, there is the possibility of presenting the product with perforations, in hoods as in bags.

Why?

Cold packaging



Some products are packed in a refrigerated environment. This means that they first cool the product in cold storage and then pack it.

In this case, they usually opt for non-perforated bags, since the product is cold and no large condensations of water happens inside the bag.

Warm packaging



Other companies pack produce in an ambient or warm environment. If they use non-perforated bags, condensation can form in the bag which can be problematic. To avoid this, perforated bags from our range can be used, which leads to perspiration and reduces condensation. Level of perforations of approximately 0.5% of the surface area of the bag.



IN FRUIT & VEGETABLES

| PRODUCT | CONSERVATION CONDITIONS | DURATION* | CASE | BAG | SHEET |
|---|-------------------------|--------------|------|-----|-------|
|  AVOCADOS | 5 - 7 °C | 50 - 55 days | ✓ | ✓ | |
|  APRICOTS | 0 - 1 °C | 36 - 41 days | ✓ | ✓ | |
|  BLUEBERRIES | 0 - 2 °C | 32 - 37 days | ✓ | | ✓ |
|  PLUMS | 0 - 1 °C | 58 - 63 days | ✓ | ✓ | |
|  KIWIS | 0 - 1 °C | 5 - 6 months | ✓ | ✓ | |
|  MANGOS | 10 - 12 °C | 56 - 60 days | ✓ | ✓ | |
|  MELONS | 7 - 9 °C | 23 - 27 days | ✓ | ✓ | |
|  PEACHES | 0 - 1 °C | 36 - 41 days | ✓ | ✓ | |
|  NECTARINES | 0 - 1 °C | 50 - 55 days | ✓ | ✓ | |
|  PEARS | 0 - 1 °C | 88 - 93 days | ✓ | ✓ | |
|  BANANAS | 12 - 14 °C | 33 - 37 days | ✓ | ✓ | |
|  WATERMELON | 7 - 8 °C | 23 - 27 days | ✓ | ✓ | |
|  CHERRY TOMATOES | 11 - 12 °C | 32 - 37 days | ✓ | | ✓ |



REACH FARTHER
DESTINATIONS



LONGER
PRESERVATION



CONSERVATION
OF QUALITY



INERT
MATERIAL



REDUCTION
OF WASTE



WIDE RANGE
OF FORMATS



CORRECT
HYDRATION

reyfresh®

BAG



| Packaging | Material | Dimensions | Code |
|--------------------------------|-------------------------------|----------------------|---------|
| Case 50x30 (Tray 4 Kgs) | Bag reyfresh® AF | 500+(2x160)x480x0,03 | OR-B1-S |
| | Bag reyfresh® AF - Perforated | 500+(2x160)x480x0,03 | OR-B1-P |
| Case 50x30 Plus (7 Kgs) | Bag reyfresh® AF | 500+(2x160)x580x0,03 | OR-B2-S |
| | Bag reyfresh® AF - Perforated | 500+(2x160)x580x0,03 | OR-B2-P |
| Case 40x30 (5 Kg) | Bag reyfresh® AF | 400+(2x160)x480x0,03 | OR-B3-S |
| | Bag reyfresh® AF - Perforated | 400+(2x160)x480x0,03 | OR-B3-P |
| Case 40x30 mini (2,5 Kgs) | Bag reyfresh® AF | 400+(2x160)x400x0,03 | OR-B4-S |
| | Bag reyfresh® AF - Perforated | 400+(2x160)x400x0,03 | OR-B4-P |
| Case 60x40 | Bag reyfresh® AF | 600+(2x210)x600x0,03 | OR-B5-S |
| | Bag reyfresh® AF - Perforated | 600+(2x210)x600x0,03 | OR-B5-P |
| Case 50x30 Plus+ (20 Kgs) | Bag reyfresh® AF | 500+(2x160)x780x0,03 | OR-B6-S |
| | Bag reyfresh® AF - Perforated | 500+(2x160)x780x0,03 | OR-B6-P |
| Case 60x40 Plus | Bag reyfresh® AF | 600+(2x210)x780x0,03 | OR-B7-S |
| | Bag reyfresh® AF - Perforated | 600+(2x210)x780x0,03 | OR-B7-P |
| Case 60x40 Plus + (Bananas) | Bag reyfresh® AF | 600+(2x210)x850x0,03 | OR-B8-S |
| | Bag reyfresh® AF - Perforated | 600+(2x210)x850x0,03 | OR-B8-P |

reyfresh®

SHEET



| Packaging | Material | Dimensions | Code |
|---------------|--------------------------------------|-------------|---------|
| Crate 125 grs | Liner sheet reyfresh® | 76x98x0,1 | OR-L1-S |
| Case 40x30 | Liner sheet or cover sheet reyfresh® | 280x380x0,1 | OR-L2-S |
| Case 50x30 | Liner sheet or cover sheet reyfresh® | 280x480x0,1 | OR-L3-S |
| Case 60x40 | Liner sheet or cover sheet reyfresh® | 350x550x0,1 | OR-L4-S |

reyfresh®

PALLET COVER



| Packaging | Material | Dimensions | Code |
|--------------------------|---|------------------------|-----------|
| Pallet 1200x1000x2200 | Pallet cover reyfresh® AF - Perforated | 1300+(2x550)x2650x0,12 | OR-F1-P |
| | Pallet cover reyfresh® AF | 1300+(2x550)x2650x0,12 | OR-F1-S |
| Pallet 1200x800x2200 | Pallet cover reyfresh® AF - Perforated | 1300+(2x450)x2600x0,12 | OR-F2-P |
| | Pallet cover reyfresh® AF | 1300+(2x450)x2600x0,12 | OR-F2-S |
| Pallet 1200x1000x2400 | Pallet cover reyfresh® AF - Perforated | 1300+(2x550)x2900x0,12 | OR-F1-B-P |
| | Pallet cover reyfresh® AF | 1300+(2x550)x2900x0,12 | OR-F1-B-S |
| Pallot | reyfresh® bottom perforated big bag | 1250+(2x525)x2300x0,05 | OR-P1-P |

reyfresh ATM

PALLET COVER



ATM SHEET

ATM COVER

COVER IN PLACE

CO₂ INCORPORATION

FINAL SEAL

| Packaging | Material | Dimensions | Code |
|-------------------------------|----------------------------------|-------------------------|----------|
| Pallet 1200x1000x2200 | Pallet cover reyfresh-ATM | 1300x(2x550)x2700x0,125 | ATM-F1-A |
| Pallet 1200x800x2200 | Pallet cover reyfresh-ATM | 1300x(2x440)x2600x0,125 | ATM-F2-A |
| Pallet 1200x1000x2400 | Pallet cover reyfresh-ATM | 1300x(2x550)x2900x0,125 | ATM-F1-B |
| Pallet 1200x800x2400 | Pallet cover reyfresh-ATM | 1300x(2x440)x2800x0,125 | ATM-F2-B |
| Deck Sheet (Red) 1200x1400 | Red sheet reyfresh-ATM | 1200x1400x0,1 | ATM-LFR |



At Reyenvas we are committed to the environment and sustainable solutions, which is why we have been developing for more than 20 years biodegradable and compostable solutions for different agricultural applications (biodegradable and compostable mulches and twines).

This experience acquired in the handling and transformation of these biomaterials has allowed us to advance, within our commitment to sustainability, through the development of the **reygreen** product range.

reygreen products provide environmentally sustainable solutions for packaging, made from fully biodegradable biopolymers and certified as OK Compost Industrial.



The aim is that, after fulfilling their function as packaging, **reygreen** products can end their life cycle in the organic waste container/deposit and biodegrade naturally, generating quality compost. This **avoids plastic waste** and closes the cycle of the Circular Economy.

This range includes films and bags in different widths and thicknesses depending on their application. The technology used ensures the correct behaviour of the product during its use, since biodegradation will not start until it is subjected to composting conditions, either in an industrial composting plant or in landfill.

As a result of this development, Reyenvas introduces its new range of reygreen bags, developed for bulk fruit and vegetables 100% biodegradable and compostable.



reyfresh green



In 2021, after several years of R&D, we have added a new product to this range that combines ripening retardant technology reyfresh in compostable material, creating the **reyfresh-green** product family.

This new development brings together in a single product the possibility of extending the shelf life of fruit and vegetables, with the introduction of a compostable packaging that contributes to reducing environmental impact within a context of sustainability and circular economy.

It is, therefore, an optimal solution for the fruit and vegetable packaging sector, providing functionality and improved sustainability management.



Commercial Range

| Packaging | Material | Dimensions | Code reygreen | Code reyfresh-green |
|--------------------------------|----------------|----------------------|---------------|---------------------|
| Case 50x30 (Tray 4 Kgs) | Bag | 500+(2x160)x480x0,03 | RG-B1-S | FG-B1-S |
| | Perforated Bag | 500+(2x160)x480x0,03 | RG-B1-P | FG-B1-P |
| Case 50x30 Plus (7 Kgs) | Bag | 500+(2x160)x580x0,03 | RG-B2-S | FG-B2-S |
| | Perforated Bag | 500+(2x160)x580x0,03 | RG-B2-P | FG-B2-P |
| Case 40x30 (5 Kg) | Bag | 400+(2x160)x480x0,03 | RG-B3-S | FG-B3-S |
| | Perforated Bag | 400+(2x160)x480x0,03 | RG-B3-P | FG-B3-P |
| Case 40x30 mini (2,5 Kgs) | Bag | 400+(2x160)x400x0,03 | RG-B4-S | FG-B4-S |
| | Perforated Bag | 400+(2x160)x400x0,03 | RG-B4-P | FG-B4-P |
| Case 60x40 | Bag | 600+(2x210)x600x0,03 | RG-B5-S | FG-B5-S |
| | Perforated Bag | 600+(2x210)x600x0,03 | RG-B5-P | FG-B5-P |
| Case 50x30 Plus+ (20 Kgs) | Bag | 500+(2x160)x780x0,03 | RG-B6-S | FG-B6-S |
| | Perforated Bag | 500+(2x160)x780x0,03 | RG-B6-P | FG-B6-P |
| Case 60x40 Plus | Bag | 600+(2x210)x780x0,03 | RG-B7-S | FG-B7-S |
| | Perforated Bag | 600+(2x210)x780x0,03 | RG-B7-P | FG-B7-P |
| Case 60x40 Plus + (Bananas) | Bag | 600+(2x210)x850x0,03 | RG-B8-S | FG-B8-S |
| | Perforated Bag | 600+(2x210)x850x0,03 | RG-B8-P | FG-B8-P |



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