

reyfresh[®]

active packaging

for the conservation of fruits and vegetables



 **reyenvas**


GRUPO
armando
alvarez



Active packaging

In the last few years we have developed a range of active packages and packings called **reyfresh®** whose main objective is to extend the shelf life of fruits and vegetables.

- 1 Allows transportation of fruits and vegetables to destinations that are increasingly afar.
- 2 Get longer duration in the shelves, coming in better conditions to the final customer.

For this, we have implemented a whole range of products to adapt to the different needs (uses) of the sector.



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.

The mechanism of **reyfresh®**, consists of the absorption of part of the ethylene that the fruit (vegetable) gives off during its ripening process. Therefore, it is an absorber that reduces ethylene in the environment surrounding the fruit, delaying its ripening and extending the life expectancy. Furthermore, the use of this technology maintains the correct hydration and freshness of the fruit during storage or transport.

Where does it work?

This technology works, mainly, with fruits called climacteric as they are:

- Cranberries
- Peaches
- Plums
- Apricots
- Paraguayan peaches
- Apples
- Tomatoes
- Melon
- Watermelon
- Banana
- Nectarines
- Pears
- Avocado
- Custard apple, etc...

There are products such as Strawberries, where despite not being climacteric, there have been observed improvements in the use of this technology. However, in the case of Strawberries, the most common is the use of Pallet Hoods for a modified atmosphere (**reyfresh**-ATM)

Alimentary use

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 fitness certificates.



Commercial range

This technology can be applied to any type of plastic packaging such as pallets hoods, bags, sheets, etc., offering a wide range of products adapted to the main packaging systems of the market.

FINAL reyfresh® PRODUCT

Packaging	Material	Dimensions	Code
PALLET 1200X1000	REYFRESH AF Perforated Pallet Hood	1300+(2X550)X2400X0,12	OR-F1-P
	REYFRESH AF Pallet Hood	1300+(2X550)X2400X0,12	OR-F1-S
PALLET 1200X800	REYFRESH AF Perforated Pallet Hood	1300+(2X450)X2200X0,12	OR-F2-P
	REYFRESH AF Pallet Hood	1300+(2X450)X2200X0,12	OR-F2-S
CASE 50X30 (TRAY 4 KGS.)	REYFRESH AF Bag	500+(2X160)+480X0,03	OR-B1-S
	REYFRESH AF Perforated Bag	500+(2X160)+480X0,03	OR-B1-P
CASE 50X30 PLUS (7 KGS.)	REYFRESH AF Bag	500+(2X160)+580X0,03	OR-B2-S
	REYFRESH AF Perforated Bag	500+(2X160)+580X0,03	OR-B2-P
CASE 40X30 (5 KGS.)	REYFRESH AF Bag	400+(2X160)+480X0,03	OR-B3-S
	REYFRESH AF Perforated Bag	400+(2X160)+480X0,03	OR-B3-P
MINI CASE 40X30 (2,5 KGS)	REYFRESH AF Bag	400+(2X160)+400X0,03	OR-B4-S
	REYFRESH AF Perforated Bag	400+(2X160)+400X0,03	OR-B4-P
CASE 60X40	REYFRESH AF Bag	600+(2X210)+600X0,03	OR-B5-S
	REYFRESH AF Perforated Bag	600+(2X210)+600X0,03	OR-B5-P
PLUS CASE 50X30+(20 KGS)	REYFRESH AF Bag	500+(2X160)+780X0,03	OR-B6-S
	REYFRESH AF Perforated Bag	500+(2X160)+780X0,03	OR-B6-P
WOODEN OR PLASTIC PALLOT	REYFRESH bottom perforated big bag	1250+(2X525)X2300X0,05	OR-P1-P
TUB 125 GRS.	REYFRESH bottom sheet	76X98X0,1	OR-L1-S
CASE 40X30	REYFRESH bottom or cover sheet	280X380X0,1	OR-L2-S
CASE 50X30	REYFRESH bottom or cover sheet	280X480X0,1	OR-L3-S
CASE 60X40	REYFRESH bottom or cover sheet	350X550X0,1	OR-L4-S



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.** There are companies that pack the product cold. It means that they first cool the product on 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 the fruit in warm (ambient temperature). If they use non-perforated bags, it can be produced a large condensation of water inside the bag. 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 of the bag.

Modified atmosphere

Among Strawberry producers, when they want to send the product to distant destinations, they usually use what we call modified atmosphere hoods.

These hoods have a controlled permeability to CO₂ and O₂ in order to maintain internal atmospheres with high concentration of CO₂, but allowing the fruit to continue to breathe during transport.

The objective is to extend the life of the Strawberries, using a different technology from that of ethylene absorption. Reyenvas for years, has hoods called **reyfresh**-ATM whose design achieves this objective.





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