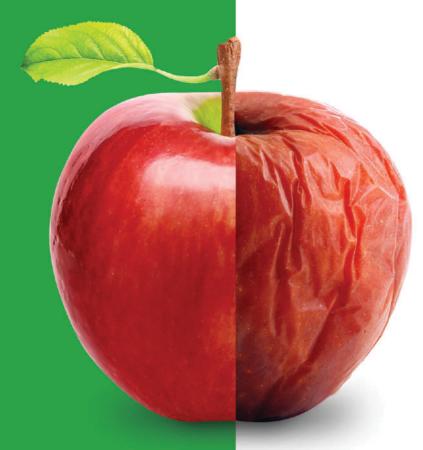


Shelf Life Extension Solutions



5 LIFE EXTENSION





About KIF

Keep-it-Fresh is a leading manufacturer of shelf life extension products. Our complete range of solutions have proven long term use in the commercial fruit and vegetable industry.

We are a 38 year old Group and Keep-it-fresh is the most renowned and reliable manufacturers of Shelf life extension solutions. We serve a network of partners distributors across the globe. Keep-it-fresh has manufacturing facility in USA, India, China, Italy, Japan and Africa.

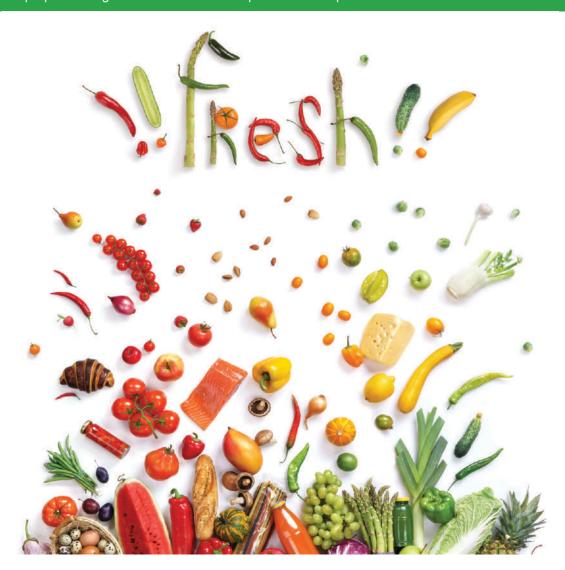
By investing in new technologies, Research and Development programmes to improve performance, we strive to deliver innovative ethylene absorption solutions.

Our long term partnerships with leading brands are built on an ethical conduct and constant value addition.

Keep-It-Fresh solutions and production facilities are certified to confirm with required norms. All products are manufactured under the most stringent conditions at par with global standards. Customers can use our products with complete confidence and conviction.

We help our customers to be more successful through innovative ethylene absorption solutions which add value to their business by maintaining the brand value, company's image and country's image. Keep-it-fresh provides added value by having its own laboratory to perform gas analysis and absorption capacity as well as shelf life extension and many other analytical tests. This ensures that our clients can benefit from our excellent technical consultancy and assessment.

Keep-It-Fresh production and handling requires the highest standards of quality and hygiene, and we exceed those standards, producing keep-it-fresh grade bulk bags, sachets, Curtain filters, EA paper filter chips and papers for our customers. All of our Keep-It-Fresh solutions facilities are certified. This means our customers can use our products with complete confidence and conviction. Keep-it-fresh application solutions are manufactured under the most stringent conditions anywhere in the world. As part of our packaging solutions, we offer our customers the facility of storing their solutions in our purpose-designed warehouse until required when requested.



KIF Sachets



KIF sachets and are available in variants of 5 gm and 10 gm. Our sachets have the unique ability to absorb ethylene and control bacterial growth.

KIF MAP BAGS



KIF modified atmospheric bags are universally used to pack fruits and vegetables. Our bags are available in custom sizes and printing.

KIF Grape & Berry Pads





Pads release SO2 to extend life of produce to prevent it from fungus or mould on the fruit. It can extend shelf life up to 3 months.

KIF Flora Fresh



Flora Power is a clear fresh flower food formulated to hydrate and nourish fresh cut bulb flowers that results in a longer life.

KIF Kiffy Pads



Kiffy Pads protects fruits from physical damages. They also are impregnated with Ethylene absorbers to reduce respiration rate of fruits and veggies.

KIF Cassetts



Cassettes are used inside the refrigerator or a small cooling area, products can be stored and life can be extended for upto 3 months.

KIF Papers & Chips



Paper sheets and small chips are used in bulk boxes or retail boxes. Placed usually on top of the box these extend shelf life. The paper should cover at least 50% of the top surface.

KIF Filters and Curtains



Curtains and filters are used for single or multiple trips in reefer containers. Usually 2-3 curtains are used for a trip of 7-14 days haulage period.

KIF Scrubber



Ethylene Scrubber (BES) extends shelf life of fruits and vegetables, minimizes loss due to decay, ensures off season availability and eliminates harmful preservation practices that use Nitrogen and Sulphur gas.

KIF O₂ Absorbers



Oxygen absorbers are added to enclosed packaging to reduce the level of oxygen in the packaging. They are used to maintain product safety and extend shelf life.







Australia



Lyon, France



Delhi, NCR Corporate Office



Delhi, NCR



Delhi, NCR









Dubai Italy Germany



Mumbai



Punjab



Chennai





Comparisons

Tem Day - 29° - Tem Night - 15° Humidity 70% - 85% rH





Comparisons

Tem Day - 29° - Tem Night - 15° Humidity 70% - 85% rH







KIF Sachet







Fresh Vegetables, Fruits & Flowers post harvesting release ethylene gas and water vapour. The ethylene gas and water vapour produced work as a catalyst to the ripening process which in turn causes faster spoilage and microbial damage.

KIF sachets are the most effective way to inhibit weight loss, improve quality and shelf life. Sachets are filled with a special composition mixture of zeolite powder and potassium permanganate that causes ethylene & moisture absorption while simultaneously causing volatile bacterial inhibition (VBI).

Ethylene causes shattering, deterioration and ripening on the other hand excess moisture is likely to speed up decay and the development of mould and fungus either during the storage/transportation period or after removal from the packaging.

Keep It fresh Sachets can be easily placed with fresh fruits, vegetables and flowers. The sachets work in multiple ways to protect and extend shelf life of fresh produce.

Keep it fresh sachets contain ethylene absorbers in a breathable Tyvek & Dupont membrane that can work under high humidity conditions.

KIF Sachets are available in different gram sizes from 2, 5 and 10, gram according to customer & volumetric requirements.







FEATURES

Absorption of Ethylene — Ethylene produced by fresh produce is absorbed by special minerals in the sachet that selectively absorb ethylene molecules.

Oxidation of Ethylene – Ethylene is attracted towards the media in the sachet and gets oxidized to water and carbon dioxide.

Absorption of moisture – The excessive moisture produced within the package is also absorbed which in turn inhibits microbial growth within the package.

VBI – The option of having a Natural Vaporising Bio Inhibitor is available with these sachets. The active ingredient is a natural plant extract, which has the capability to inhibit microbial growth in its presence.

APPLICATIONS

- Fruit corrugated boxes (export standard)
- Vegetables corrugated boxes (export standard)
- Fruits and vegetable crates
- Fruits and vegetables bags
- Flower boxes and bag packing



KIF Map Bags







Product KEEP-IT-FRESH films and bags contains Special properties of shelf life enhancement of fresh and vegetables from 40% to 400%. Fresh Vegetables and Fruits start to ripen after harvesting and during the ripening process, the fruits and vegetables release ethylene gas.

This ethylene gas in the package increases the ripening rate of the fresh produce hence aggravating the ripening process resulting into faster rotting of the fresh produce. The ethylene gas produced works as a auto catalyst for ripening which in turn produces higher sugar levels causing microbial spoilage of the fruits.

The plastic articles produced by using KEEP-IT-FRESH absorb the harmful ethylene gas Produced hence slowing the ripening and rotting process and increasing the shelf life of the Packed produce.

The film produces shows upto 5 times increases in the shelf life of bananas kept without packaging and improves the shelf life of tomatoes by upto 3 times.

Tests performed on various fresh fruits and vegetables shows that the produce kept in open started to rot in 3-5 days where as the ones in the KEEP-IT-FRESH bags were good even on the 10th - 15th day compared to the ones in generic plastic bag.







KIF Map Bags Variatons







ETHYLENE ABSORPTION

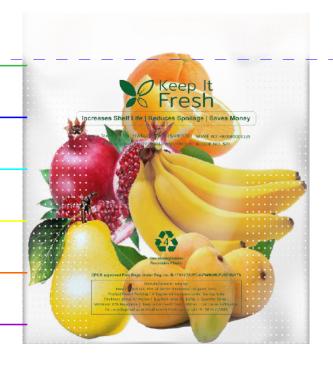
Co₂ MODULATION

O2 ABSORPTION

ANTI-MIST TECHNOLOGY

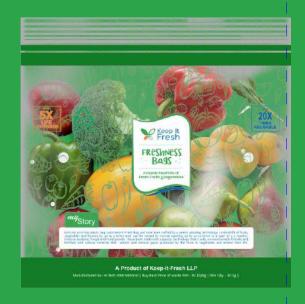
MICRO PORES

FUNGAL REDUCTION



VARRIATIONS	2D/3D	VACUUM	O ₂ ABSORPTION	CO ₂ MODULATION	ETHYLENE ABSORPTION	ANTI FOG
MANGO BAGS	✓	×		✓	✓	✓
BANANA BAGS	✓	✓	√	✓	✓	✓
PAMOGRANATE BAGS	✓	×	Y	✓	✓	✓
- AVOCADO		*		- √- -		
KIWI BAGS	✓	×	√	✓	✓	✓
STONE FRUITS BAGS	✓	×		✓	✓	✓

KIF Zip Lock Bags



ZIP LOCK

ETHYLENE ABSORPTION

Co2 MODULATION

02 ABSORPTION

ANTI-MIST TECHNOLOGY

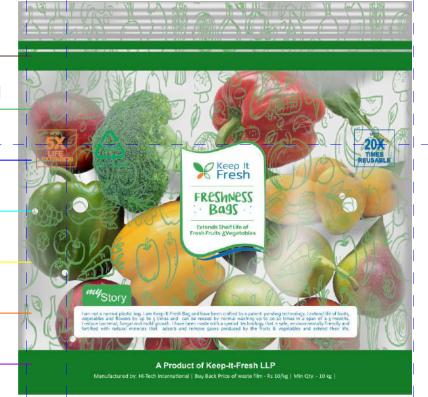
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FEATURES

- Absorption of Ethylene The ethylene produced by the fresh produce is absorbed by the special minerals in the sachet that selectively absorb ethylene molecules.
- Oxidation of Ethylene The Ethylene is attracted towards the media in the sachet and gets oxidized to water and carbon dioxide.
- Absorption of moisture The excessive moisture produced within the package is also absorbed which in turn inhibits microbial growth within the package.
- VBI The option of having a Natural Vaporising Bio Inhibitor is available with these sachets. The active ingredient is a natural plant extract, which has the capability to inhibit microbial growth in its presence.
- The film has special macro and micro pores to allow breath ability of moisture and the antifog properties do not allow the mist to settle in the packaged films.

KIF Grape Pads





Keep It Fresh Grape Pads are used for the protection of table grapes during storage and shipping.

The pads have multiple layers with SO2 releasing chemicals in between. The grape pads poses unique fast and slow release mechanism.

We use micro-perforation to allow quick release of SO2 gas. The technology allows for water activation of the pads to quickly release SO2. Simply sprinkle water on the printed surface of the pad and the water or moisture can interact with the chemical inside for a faster and instant release of SO2 gas.

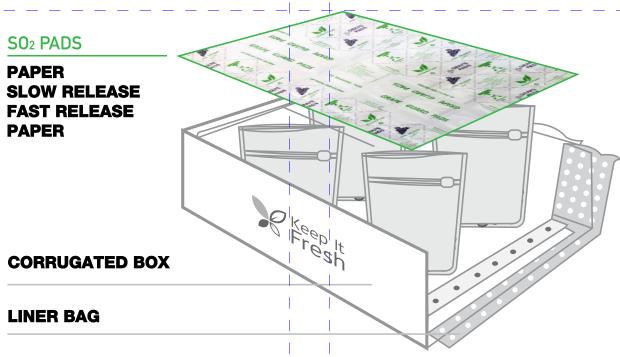
Post the quick release function KIF grape pads allow sustained release of sulfur dioxide from the sodium metabisulfite salt, contained between paper layers. Humidity inside the grape box reacts with this salt, thus generating sulfur dioxide (So2). The gas is then slowly released owing to the semi-permeable barrier, controlling the development and/or spreading of Botrytis cinerea, one of the main post-harvest diseases affecting table grapes.











EXTENDS LIFE UP-TO-60 DAYS

APPLICATIONS

- Protection of Fresh fruits, Vegetables and Flowers from fungal effect
- Increase the shelf life of produce
- Inhibits growth of mould and fungus and absorbs unrequired moisture
- It offers protection and control over the Botrytis Cinerea
 fungus for large periods of grape transit and or storage time.
- It keeps the grape rachis fresh and green.
- Supports the maintenance of the optimum condition of the grape.

KIF DRY Pads







Made from natural materials

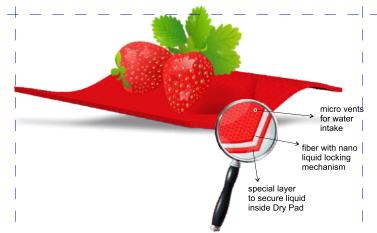


KIF- SORB has been developed, tested and found excellent in performance and has Godot technology with an embossed topcoat to give excellent cushioning allied to micro perfs that wick the water droplets away within microseconds.

Available in pad and reel-fed formats, KIF-Sorb is the fastest, most cost effective, way of reducing fungal rot and food wastage.

MULTIPLE COLORS AVAILABLE







Remains Dry
Prevents fungal growth



High absorption capacity
Prevents wetting of bottom



Micro perfs to allow easy penetration



High cushioning — — — to prevent physical damage

KIF DRY Pads

Special Attributes



Provides excellent cushioning to berry family without Occupying much space



Microbial Growth of Microbes & Mold is significantly reduced



Smooth surface reduces bruises and damage to soft fruits during transportation



Can be installed easily & Quickly



Micro vents on top side of Dry Pad absorbs water & Liquids



100% Recycable



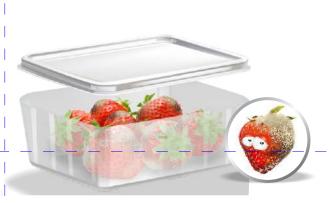
Natural Nano Locking mechanism locks liquid inside the fabric



Contains no Chemicals

Makes Packing Attractive & Beautiful

Strawberries Without DRY PADS



Strawberries With DRY PADS



KIF Jiffy- Cushion Pads with Ethylene Control







KIF Kiffy Pads ensure the safety of fruit during shipment and storage by providing a protective barrier that absorbs shock and prevents bruising and additional damage.

In addition it is infused with Ethylene absorbers that prevent decay of fruits and veggies and extend the life of produce.

Using industrial recycled paper and industrial cotton, KIF Kiffy pads are produces by meshing them together and securing it between layers of paper, forming a cushion that can gently mold around fruit in a shipment box.

HOW IT WORKS?

Simply place the pad on top or in between layers of the fruits.

Pads can be reused over multiple times unless it has been physically damaged.

Ethylene absorption formula inside the pads works for most fruits and vegetables to reduce ethylene content hence decreasing respiration rate and increasing shelf life.











KIF Berri Pads









Gray mold (Botrylis cinerea) is the most destructive of the postharvest diseases of strawberries, it is the greatest cause of postharvest strawberry losses. This fungus continues to grow even at 0°C (32°F), however growth is very slow by use of KIF Berry pads packed at this temperature.

Rhizopus Rot.Caused by the fungus Rhizopus stolonifer. Spores of this fungus are usually present in the air and are easily spread. This fungus will not grow by use of KIF Berry pads special antifungal phenomenon, when inserted at temperatures below 5°C (41 °F), therefore KM; Berry pads with recommended temperature management is the simplest method of control.

KIF Berry Guards/Pads are the most effective way to inhibit pathological disorders in berries.

FEATURES

- Removes mould and fungal growth, decay, discoloration resulting in no wilting, softening, scald, loss of crunch, tenderness, weight loss etc.
- Use during postharvest handling of Berries and increases the shelf life of Berries during storage and transit at controlled temperature (Cold Store).
- Slowdowns the deterioration rate. Use during storage or domestic and international shipments like via air, sea, reefer vans, train trucks, moving coolers units, CA rooms and cold storage's.
- Do not keep Berry Guard Sheet open. It gets activated from atmospheric moisture. Unused





KIF Curtains are used primarily in reefer containers and cold storages to absorb ethylene. Long haulage and transportation can cause excessive accumulation of ethylene gas inside the container. This leads to alarmingly high acceleration of ripening and early decay of the produce.

Keep It fresh Curtains can be easily placed in cold storages, walking coolers, reefer vans and non reefer vans of fresh fruits, vegetables and flowers. The KIF Curtains work in multiple ways to protect and extend shelf life of fresh produce.

Keep it fresh curtain contain ethylene absorbers packed with nonwoven cloth which acts as breathable membrane. The absorption of the gas reduces the ripening speed and hence increasing the shelf life of fresh produce.

CURTAIN TO BE PLACED NEAR INTAKE AIRFLOW



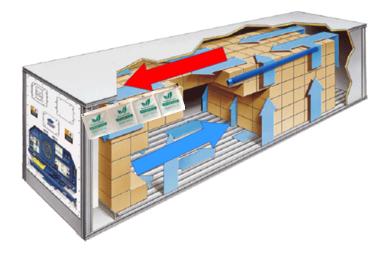


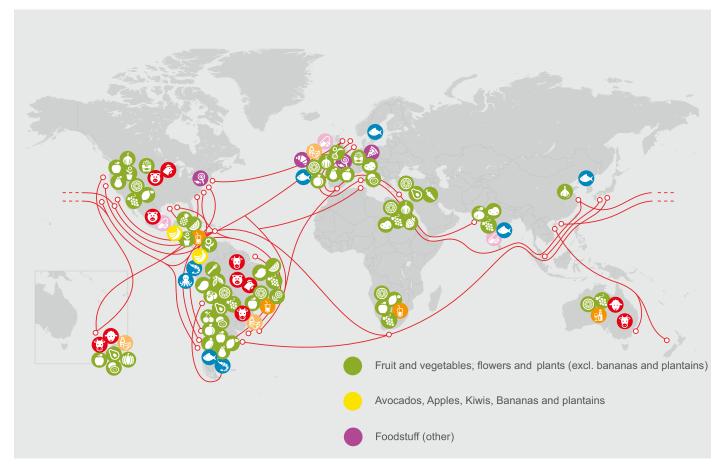


ANTI FUNGAL



PREVENTS DECAY





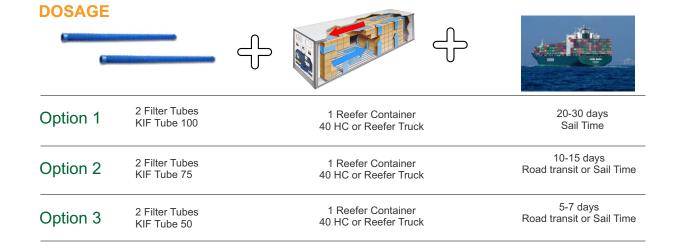
KIF Filters, Ethylene Curtains, Oxygen Absorbers can be used in reefer trades globally

FEATURES

- Removes mould and fungal growth, decay, discoloration resulting in no wilting, softening, scald, loss of crunch, tenderness, weight loss etc.
- Use during postharvest handling of Berries and increases the shelf life of Berries during storage and transit at controlled temperature (Cold Store).
- Slowdowns the deterioration rate. Use during storage or domestic and international shipments like via air, sea, reefer vans, train trucks, moving coolers units, CA rooms and cold storage's.
- Do not keep Berry Guard Sheet open. It gets activated from atmospheric moisture. Unused Berry Guard Sheet must be repacked in poly bags immediately.

APPLICATIONS

- Reefer vans
- Non reefer vans
- Cold storages
- Sea containers
- Walking coolers
- Retail chambers
- CA Rooms
- Retail transport and shelves



KIF Scrubber









Keep it fresh scrubbers will reduce ethylene levels up to 98.9 percent to reduce shrinkage and extend shelf life. The unit holds 50 kg of the Kif power Balls. The media can effectively lower ethylene gas readings in storage areas from 75,000 to 150,000 cubic feet, depending on the commodities being stored. In larger rooms more machines can be used. It can also be deployed to control moulds, bacteria and remove odours.

Each unit uses 50 kg of media. The machines are built to ensure proper air speed across the pellets. This ensures correct reaction time required to remove ethylene gas. The unit works in conjunction with your cooling system air movement.

SPECS	KIF SCRUBBER MINI 50,000 CFT AREA	KIF SCRUBBER TURBO 100,000 CFT AREA		
DIMENSIONS	457.20 x 273.50 x 765 mm	910 x 750 x 460 mm		
WEIGHT	31.4 Kg	90 Kg		
TRAY SIZE	545 X 250 X 560 mm	600 X 290 X 280 mm		
VOLTAGE	110 V / 220 V	110 V / 220 V		
AMP	1 AMP	2.5 AMP		
CHANGE CYCLE	Approx 1-2 months	Approx 1-3 months		
BLOWERS	2	2		



ALSO AVAILABLE

Ethylene Scrubber + O₂ Scavenger Odour Removers Ozone



KIF Scrubber Turbo & MINI

FEATURES

- Removes mould and fungal growth, decay, discoloration in results no wilting, softening, scald, loss of crunch, tenderness, weight loss etc.
- Use during postharvest handling of produce (fresh fruits, vegetables and flowers)
- Slowdowns the deterioration rate.
- Use during storage or domestic and international shipments like via air, sea, reefer vans, train trucks, moving coolers, kitchen refrigeration units and cold
- Nature friendly, made up of natural minerals, chemically inert and non-toxic.
- Can be decomposed of as normal waste.

APPLICATIONS

- Protection of Fresh fruits, vegetables and flowers from ethylene, moisture and fungal effect.
- Increases the shelf life of produce in Cold stores and reefer vans.
- Inhibits ripening, growth of mould and fungus.



100,000 CU FT AREA
DIMENSIONS
|CHANGE CYCLE - 30 DAYS

25,000 CU FT AREA
DIMENSIONS
CHANGE CYCLE - 30 DAYS

KIF Papers & Chips







Keep It fresh Paper can be easily placed with fresh fruits, vegetables and flowers in trays and boxes or can be used for wrapping. The sachets work in a multiple ways to protect and extend shelf life of fresh produce. KIF Solution is the most effectkre way to inhablt weight loss, quality and shelf life is to use KIF Shelf Life Extension Series Systems. Papers are coated with a special composition mixture of zeolite powder and potassium permanganate in a fixed certain percentage that causes ethylene & moisture absorption and simultaneously causing volatile bacterial inhibition Nag. Ethylene causes shattering, deterioration and ripening on the other hand excess moisture is likely to speed up decay and the development of mould and fungus either during the storage/transportation period or after removal from the packaging.

Fresh Vegetables. Fruits & Rowers start to ripen after harvesting and during the ripening process release ethylene gas and water vapour. This ethylene gas when in the package increases the ripening rate of the fresh produce hence aggravating the ripening process resulting into faster rotting of the fresh produce. The ethylene gas and water vapour produced work as catalyst to the ripening process which in turn causes faster spoilage and microbial damage.

Fresh Vegetables. Fruits & Rowers start to ripen after harvesting and during the ripening process release ethylene gas and water vapour. This ethylene gas when in the package increases the ripening rate of the fresh produce hence aggravating the ripening process resulting into faster rotting of the fresh produce. The ethylene gas and water vapour produced work as catalyst to the ripening process which in turn causes faster spoilage and microbial damage.

Keep It fresh Papers forms a breathable membrane the moment it comes in contact with fresh fruits and vegetables. These can be easily placed with the fresh produce and absorb the ethylene gas which gets entrapped within these papers. The absorption of the gas reduces the ripening speed and hence increasing the shelf life of fresh produce. KIF papers are available in different sizes from according to customer & volumetric requirements.



FEATURES

- Absorption of Ethylene The ethylene produced by the fresh produce is absorbed by the special minerals in the sachet that selectively absorb ethylene molecules.
- Oxidation of Ethylene The Ethylene is attracted towards the media in the sachet and gets oxidized to water and carbon dioxide.
- Absorption of moisture The excessive moisture produced within the package is also absorbed which in turn inhibits microbial growth within the package.
- VBI The option of having a Natural Vaporising Bio Inhibitor is available
 with these sachets. The active ingredient is a natural plant extract,
 which has the capability to inhibit microbial growth in its presence.

KIF Flora Fresh









Flora Fresh is a clear fresh flower food formulated to hydrate and nourish fresh cut bulb flowers for the maximum enjoyment of the customer.

This product is specially formulated to work best on most flowers. It can be used with mixed bouquets and all flower varieties for exports, hotels or home use.

FEATURES

- Unique ingredients enhance bulb performance with an increased vase life versus standard flower food formulas.
- Prevents premature bent neck and stimulates water uptake. Bulb food solution works to reestablish the nutrient balance once the flower is harvested.
- Reduces Microbial Growth.
- Provides Nutrients to the flower.
- Increases Flower solution Uptake.
- Clears veins for flow of xylem and phloem to increase nutrient supply to the flower.
 - No Leaf Wilting, Leaf Chlorosis and Petal Fading.
- Increases Life Upto 3 times.
- Reduces the Ethylene Production.



DIRECTIONS

- Remove foliage on stem which will be below the solution level in the container.
- Recut the flower stems with a clean, sharp knife or cutter. Make sure vase or flower container is clean prior to use.
- Mix flower food according to the packet instructions for 1 quart finished solution and pour into vase. Put stems into vase and enjoy.

KIF Cassettes







Recyclable natural materials

KIF Cassettes are special device based of innovative technology to absorb ethylene and are filled with natural material that causes volatile bacterial inhibition to extend the shelf life of fresh fruits and vegetables stored in refrigerated conditions.

Fresh Vegetables, Fruits & Flowers start to ripen after harvesting and during the ripening process release ethylene gas and water vapor.

This ethylene gas when in the storage package increases the ripening rate of the fresh produce hence aggravating the ripening process resulting into faster rotting of the fresh produce. The ethylene gas and water vapor produced work as catalyst to the ripening process which in turn causes faster spoilage and microbial damage.

Natural occurring clay and minerals are filled in snap fit box sealed with ultrasonic rays to form Keep-It-fresh Capsules. KIF Capsules can be placed inside refrigerators and walking coolers with fresh fruits. vegetables and flowers. The Capsules work in a multiple ways to protect and extend shelf life of fresh produce. Keep it fresh Papers forms a breathable membrane the moment it comes in contact with fresh fruits and vegetables.



FEATURES

- Absorbs ethylene, unrequired moisture and volatile bacterial from the refrigerated containers.
- Removes mould and fungal growth, decay, discoloration in results no wilting, softening, scald, loss of crunch, tenderness, weight loss etc.
- Use during postharvest handling of produce (fresh fruits, vegetables and flowers).
- Slowdowns the deterioration rate.
- Use during refrigerator storage or walking coolers kitchen refrigeration units.
- Nature friendly, made up of natural minerals, chemically inert and non-toxic.

KIF Oxygen Absorbers







Oxygen scavengers Of oxygen absorbers are added to enclosed packaging to help remove or decrease the level of oxygen in tho package. Thoy are used to help maintain product safe, and extend shelf life.

There are many types of oxygen absorbers available to cover a wide array of applications. The components of an oxygen absorber vary according to intended use, the water activity of the product being preserved, and other factors.

HOW IT WORKS?

- Nuts, cut trots, grains etc breathe in an air tight system.
- They absorb Oxygen in this process and reach their expiry faster.
- KIF 02 absorbers control the respiration rate by scavenging the oxygen in the package.
- It lower. oxygen and prevent myco and aflatoxins development and chemical oxidation.
- The hermetic condition is maintained in the packaging.







Reduces 0, Levels In Packaging

KIF Germination Paper







Germination paper is a revolutionary product that allows the absorption of extra moisture and water that settles inside the box of produce. The paper has very high absorption capacity of up to 200% Water.

During the normal course of storage of fresh produce water is released from the fruits and vegetables. This water tends to settle at the bottom of the packaging and starts the growth of microbial's. To control any adverse effects of germs, fungus, dour or the new germination paper is effective to absorb extracts water and hence reduce the microbial growth in the packaging.

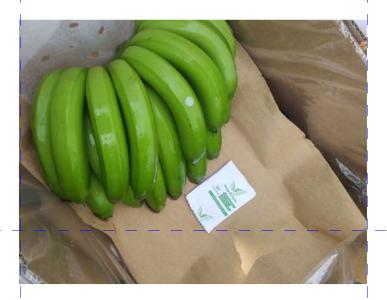
A lot of produce is packed and exported to various countries around the globe with Li times between 15 to 40 days. During this course of time they produce goes to various thermal shocks, natural respiration that releases the moisture in the packaging.

Excess water in the packaging leads to growth of fungus, microbes, bacteria is, mold and eventually leads to the deterioration of produce. This causes the produce to decay and be rendered useless for human consumption.

Keep it fresh germination paper is made from hundred percent recyclable paper that has stretch ability and very high puncture strength, elongation, absorption capacity. The paper can be recycled after usage and hence does not cause any harm to the environment and is recognized to be safe for contact with food and fresh produce.

FEATURES

- Following features allow the germination paper to be ideal for use In fresh produce, vegetables, fruits
- Lowers growth of fungus mould and odour.
- 200% more absorption capacity than the weight of the paper.
- High stretch ability and creeping of the paper allows more water to be absorbed in its core.
- 100 percent recyclable paper.
- Available in roll form, cut sheets, sheet on roll and invites from 2 inches to 40 inches.



Shelf Life Extension Solutions





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USA | Italy | France | China | Mexico | Poland | Germany | South Africa