Product

1. Anti Fog
2. Odour Assorb
3. Antibacterial
4. PE-PP Fresh Keeping
5. PET Fresh Keeping
6. Anti Rodents
Anti Fog

Masterbatch Anti Fog

The agricultural film must have special properties to ensure to the cultivar an ideal microclimate for growth. The additives must be designed for the migration on the surface in a manner that the process takes place very slowly and must be compatible with the polymer matrix to slow down the extraction rate during the duration of the film.

The use of mist in agricultural films must have the property to create HYDROPHILY

Benefits with the use of our masterbatch:
- High transparency of the substrate;
- Improved light transmission with consequent increase in the growth of the cultivars;
- Higher crop yields per plant;
- Increase in fruit ripening;
- Reduce the burning of plants and fruits;
- Low maintenance;
- Long lasting;
- Non-toxic, non-harmful
- High concentration of active ingredient;
- Eliminates the water drops inside;
- Ideal for hydroponics.

Masterbatch Anti Fog Idro 003-001

Masterbatch for LDPE Monolayer

The masterbatch IDRO 003-001 is recommended for the production of plastic materials in mono layer low density polyethylene (LDPE), the result are a strong anti fog effect, and an increase of the light transmission on the fruit and on the vegetable inside the greenhouse. The Anti Fog masterbatch increase the shelf life of the polymer.

Dosage: Add it in mass, use the 5% of IDRO 003-001 in your formula.
Benefit: Anti Fog effect
Used for: LDPE-LLDPE Mono layer film
Packaging: Minimum order 25 Kg. - Standard: 1 pallets of 600 Kg.
Delivery: Ex work

CODE: IDRO 003-001

Masterbatch Anti Fog Idro 003-002

Masterbatch for Multilayer Film

The masterbatch IDRO 003-002 is recommended for the production of plastic materials in a multilayer film, for example a co-extruded structure. Typically these structures are employed to allow the use of the core layer of the structure to achieve a controlled release effect of the anti-fogging additive to the surface of the film gradually over time.

The results are a strong anti fog effect, and an increase of the light transmission on the fruit and on the vegetable inside the greenhouse. The Anti Fog masterbatch increase the shelf life of the polymer.

Dosage: Add it in mass, use the 9% of IDRO 003-002 in the core layer and the 5% in the inner layer.
Benefit: Anti Fog effect, high transparency of layers in time.
Used for: Triple layer films - External layer LDPE, Core layer EVA 17%VA ±1%, Inner layer EVA 4%VA ±1%.
Packaging: Minimum order 25 Kg. - Standard: 1 pallets of 600 Kg.
Delivery: Ex work

CODE: IDRO 003-002
Masterbatch for Cloth in Polyamide

Masterbatch for cloth in polyamide
Contains active antibacterial
Contains odor absorber
Contains a special molecule able to self-clean the surface.

Benefit:
- Antibacterial Effect
- Self-cleaning
- Eliminates odors such as ammonia
- Decompose the V.O.C.
- Blots will decompose when exposed to daylight.
- High durability of the wire

Usage: add it in mass to 4%.

The results are very satisfactory:
Delta reduction of bacterial load on Staphylococcus with ADM-PO-AO-01 Masterbatch is >60%.

Procedure:
UNI-EN-ISO 20743/2013

Polyamide Anti Odour

Masterbatches for POLYAMIDE

The masterbatches ADM-PO-AO-01 is recommended for the production of masterbatches in order to make a plastic material polyamide antibacterial, and can remove many volatile organic compounds. Has a very strong action to ammonia. It is insoluble to 99% approximately. The special additive in the master is activated by light, giving the final product the following properties:
- Removing odors and gases
- Reduction of bacteria present on the cloth
- Increase the durations of the polyamide

Dosage: Add it in mass, use the 4% of MB in your formula. (Reduce the dosage if you see color variations)
Benefit: Increase the durations of the fibers, antibacterial protection, V.O.C. and ammonia decomposes, self-cleaning.
Used for: POLYAMIDE
Packaging: Minimum order 25 Kg. - Standard: 1 pallets of 1.125 Kg.
Delivery: Ex work

CODE: ADM-PO-AO-01
Masterbatch Antibacteria

The small diameter micrometer particles allow the masterbatch to be particularly suitable for the use in coatings, food films, synthetic fibers and monofilaments. Its resistance to high temperatures allows the masterbatch to be compatible with extruded polymer able to overcome the threshold of 300°C.

It is used in:
- Film PE, PP, PET, polyamide and for the food industry.
- The material such as nonwoven fabric and film for packaging.
- Fridges consist of extruded parts.
- Personal care items such as toothbrushes.
- Coatings for furniture as trolleys, cabinets and drawers.
- Good for the carpets, laminate flooring, vinyl floor coverings, and handles.
- Articles for bedding, such as filling fiber pillows, mattress ticking and upholstery.
- Sanitation, such as toilet seats, sinks, bathtubs and showers.
- Articles for cleaning such as brooms, mops and snot.
- Industrial applications such as filters, ropes, cloth seats for cars, etc.

Dosage:
An additive in mass: For food, use 2% of ADM-01 BACT-PE-PP-BOPP-PET
Stable at temperatures up to 300°C

Antibacteria MB

The masterbatch ADM-BACT-01 is recommended for the production of food packages based on PE-PP-BOPP-PET, polyolefin and for all materials and rubber. It gives to a material the antibacterial properties. The shape of the crystal structure of the additive is micrometric. It is insoluble to 99% approximately.

MB Dosage: Add it in mass for food contact, use the 2% of ADM-BACT-01 in PE-PP-BOPP-PET
Benefit: Antibacterial substrate
Used for: ADM-BACT-01: PE-PP-PET-Polyamide
MB Packaging: Minimum order 25 Kg. - Standard: 1 pallets of 1.125 Kg.
Extrusion: The max temperature of extrusion is 300°C.
Delivery: Ex work

CODE: ADM-BACT-01
Masterbatch for PE - PP - BOPP - Fresh Keeping

Masterbatch for PE is recommended for all transformations of polyethylene and in particular for the production of coextruded films for the packaging of fruit and vegetables. The blend of additives contained in the master is able to:
- Adsorb all volatile organic compounds (VOC) of the packaging, and particularly the ethylene gas, the main cause of the increase of the speed of maturation of the fruits or vegetables;
- Controlling the growth of bacteria due to a phenomenon of a catalyst activated by light, then sanitizing the content without affecting the optical properties of the film (haze and gloss).
Non-toxic formulation.

You can use for:
- Film in PE, PP and BOPP for the food processing industry;
- Packaging material such films.

Dosage:
Add it in mass, use the 5% of ADM-PE-FK-01 or ADM-PP-KF-02 in your formula.

Stable at temperatures up to 250°C

Layer:
Film coex PE (25-50-25) - thickness 35 μm.
Film coex BOPP (5-90-5) - thickness 30 μm.

Masterbatches for PP
The masterbatch ADM-PP-FK-02 is recommended for the production of masterbatches in order to make a plastic material polypropylene antibacterial, and can remove many volatile organic compounds. The form of the crystal structure of the additive is micrometric. It is insoluble to 99% approximately. The special additive in the master is activated by light, giving the final product the following properties: - Removing odors and gases - Reduction of bacteria present on the plastic, - Increase the shelf life.

Dosage:
Add it in mass, use the 5% of MB in your formula.

Benefit:
Increase the shelf life, antibacterial film, V.O.C. and ethylene decomposes, anti-fog.

Used for:
- PP-BOPP

Packaging:
Minimum order 25 Kg. - Standard: 1 pallets of 1.125 Kg.

Delivery:
Ex work

CODE: ADM-PP-FK-02
Masterbatch for PET - Fresh Keeping

Masterbatch for PET is recommended for all transformations of PET and in particular for the production of coextruded trays for the packaging of fruit and vegetables. The blend of additives contained in the master is able to:
- Adsorb all volatile organic compounds (VOC) of the packaging, and particularly the ethylene gas, the main cause of the increase of the speed of maturation of the plant;
- Controlling the growth of bacteria due to a phenomenon of a catalyst activated by light, then sanitizing content without affecting optical properties of the film (haze and gloss).
Non-toxic formulation.

You can use for:
- Thermoformed trays in PET for the food processing industry;
- Packaging material such PET trays.

Dosage:
Add it in mass, use the 5% of ADM-PET-FK-01 in your formula.
Stable at temperatures up to 250°C

Layer:
Trays in PET (5-90-5) - Add the MB in the inner layer

These data were processed by a primary Italian university, center of excellence for the study of packaging systems destined for food contact. Tests were performed for 23 days on the cherry tomato, constant temperature of 4°C. Here we show the results. More data available.

1. Reduction of the bacteria number in the first 7 days: - 92.7%
2. Weight loss after 23 days: - 3%
3. Consistency of the fruits increase of: + 5 gg.
5. pH values unaltered for: 23 gg.
6. Global quality increase of: + 25%

A revolution in the P.E.T. masterbatch

CODE: ADM-PET-FK-01
Masterbatch Anti Rodents

The masterbatch ROD-01 can be applied in many plastic substrates. It was created for industrial applications of electrical cables, telephone and fiber optics. Those materials will be protected for a long number of years from the dangers of rodents. Can be used on plastic bins for rubbish, trash bags, PVC pipe, household appliances, rubber for the automotive industry, switches and micro switches, control panels, or any plastic material with low or high density. The ROD-01 is a masterbatch for the permanent protection of plastic products. In addition to protecting the polyolefin substrates mechanically, it provides protection from rodent attack in accordance with the EU Regulation 528/2012 of the European Parliament and of the Council of 22 May 2012 concerning the making available on the market and use of biocidal products. The new formula is based on chemical compounds micrometric not disciplined in the list of biocidal products, so our additive does not require a license (BPR). A material, an additive, a masterbatch or a protective coating, for example, the masterbatch ROD-01, applied to an electric cable, falls in the definition of a treated article. Treated articles are not subject to registration in accordance (BPR), provided that their primary function is not to be a biocide. In this case the primary function of an electrical cable must be that of a conductor of electricity and not be an product anti-rodent. In addition, the master ROD-01 has primary characteristic to be a permanent protective for plastic materials. These products can be marketed without restrictions. It is recommended the use of the ROD-01 for the treatment of all polyolefin polymers, rubbers and PVC. Consider a primary use in the field of electrical or telephone cables and optical fibers which require a permanent protection. The World Health Organization estimates that 26% of fires of unknown origin of electric and telephone cables is attributed to the activity of rodents. 

Dosage:
Add it in mass, use the 4% of ROD-01 in your formula.

Since they use ROD-01 I have eliminated from my diet the electric cables

ROD-01 MB

The masterbatches ADM-ROD-01 is recommended for the production of LLDPE - LDPE - HDPE it gives a permanent protection to the polyolefins products. Recommended for: Electricity and telephone cables, optical fibers, plastic bins for rubbish, trash bags, PVC pipe, household appliances, rubber for the automotive industry, industrial switches, micro switches, electrical panels, and more.

Dosage: Add it in mass, use the 4% of ADM-ROD-01 in your formula.
Benefit: Permanent protection
Used for: LLDPE - LDPE - HDPE
MB Packaging: Minimum order 25 Kg. - Standard: 1 pallets of 1.125 Kg.
Extrusion: The max temperature of extrusion is 250°C.
Delivery: Ex work

CODE: ADM-ROD-01
TiO2 Lab is an engineering company that provides integrated solutions for companies in a way qualified and intelligent. It is the group company interested in the research and development of micro and nanotechnology.

Our activities include: chemical engineering, food engineering, biology, but mostly we study new intelligent molecules, for the food industry, agriculture and packaging. Where required, in collaboration with the leading Italian universities of chemistry and microbiology, we integrate the work done in our laboratories. The staff of TiO2 Lab is available to our customers for testing and analyzing any type of substrate with the extraordinary properties of the articles produced by us.

We are the link between the industry and the technology of a nano or micro structure applied to a material.

Chemical Analyses
micro-bacteriological analysis
analysis storability of packaged food products
artificial aging tests
study and analysis of the performance photocatalytic
analysis NO, NO₂, NOx according to EN ISO 11238-2 and 11247
analysis SO, SO2, SOx, Pm1, 2.5, 10, V.O.C.
creation ad hoc of smoke chambre
SEM and TEM electron microscopy
spectrophotometry and spectroscopy UV-Vis
light analysis, patents, validations university
competition analysis, study of smart materials
antibacterial agents for the food industry
masterbatches, additives smart, fresh keeping, antifog and more ..