



## CORPORATE OFFICE

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### BAJAJ SUPERPACK INDIA LIMITED

Plot No. B – 14, Hingna Industrial Area,  
Hingna Road, Maharashtra, Nagpur – 440016

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☎ +91 9930994447

✉ mayur@bajajmb.com

☎ +91 9890917476

✉ info@bajajmb.com

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[www.bajajmb.com](http://www.bajajmb.com)

**PRODUCT**  
BROCHURE



## ABOUT BAJAJ SUPERPACK INDIA LIMITED

We are a leading masterbatch manufacturer having begun our operations three decades back in Nagpur, Maharashtra India.

We are an ISO 9001: 2015 certified company from TUV Nord and it is our endeavour to produce products meeting stringent quality standards consistently with an aim of achieving near zero defects.

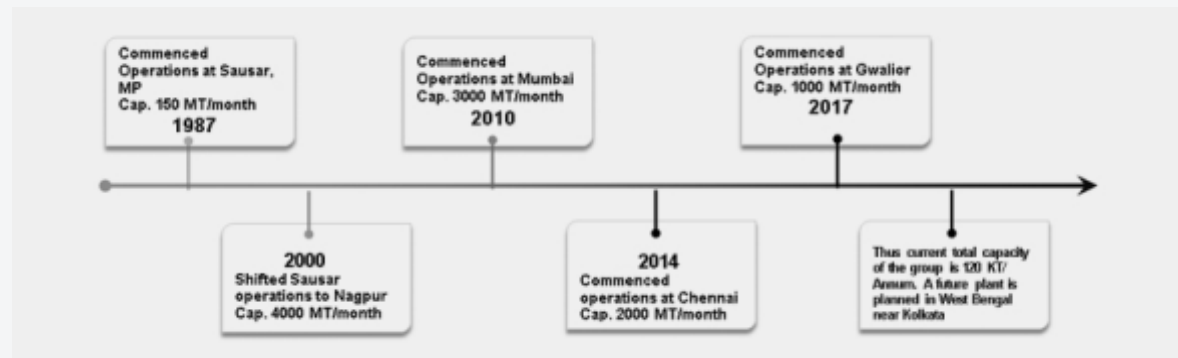
Consistent quality backed by transparent business practices and long term relationships is our forte.

## History & Milestones

We are one of the leaders in masterbatches for specific segments of Industrial packaging and with our four plants in India our current production capacity is 120 KT/ annum.



We are a dynamic company and aspire to diversify our product offerings to cater to the niche and speciality requirements of plastics industry in India and overseas markets in coming few years. With this aim we are continuously striving to enhance our capability in terms of process technology, material science, research and analysis capability and specific skill sets of our human resources.



## ADDITIVE MASTERBATCH PLAST ANTI BLOCK

### MODE OF ACTION

Increases micro-roughness of films thereby preventing the blocking of adjacent layers of film during winding / unwinding. Also helps for easy opening of package

### KEY FEATURES

- Based on Inorganic – natural / synthetic OR Organic actives
- Optimum balance of Anti blocking effect and transparency
- Can be combined with a suitable slip agent for a combination of slip and anti-block property

### DOSAGE

0.5 – 6 % - may vary as per thickness, service environment and expected service life from the product

### APPLICATIONS

Mono and Multi layer films of PE and PP

## PLAST ANTI FOG

### MODE OF ACTION

Migrates to polymer surface and reduces its surface tension so that water droplets formed on it fuse into a continuous transparent water film thereby eliminate fogging

### KEY FEATURES

- Oleochemical derivative with optimal balance of efficacy and service life
- Optimum balance of Sealability, Printability and Lamination characteristics
- Suitable for both Hot fog and Cold Fog applications

### DOSAGE

5 – 6 % - may vary as per thickness, service environment and expected service life from the product

### APPLICATIONS

Mono and Multi layer films of PE and EVA



## PLAST ANTI MICROBIAL

### MODE OF ACTION

Inhibits bacterial and fungal growth on plastics by disrupting their cell membrane and also inhibiting enzymes and proteins vital for their function

### KEY FEATURES

- Based on inorganic Silver technology OR Organic actives
- Can meet standards like JIS Z 2801, ASTM G 21 – can also meet other specific standards required by clients
- Food grade also offered – can be used in indirect food contact applications

### DOSAGE

2 – 3 % to meet JIS Z 2801 / ASTM G 21 - may vary as per other standards

### APPLICATIONS

Injection Moulding articles Extrusion sheets and films  
Extrusion Blow Moulded components  
Injection Blow Moulded products Roto Moulded Articles





## PLAST ANTI OXIDANT

### MODE OF ACTION

Inhibits thermo-oxidative degradation of plastics by reacting with and deactivating free radical and hydro peroxide intermediates which can be generated at elevated processing and service temperature in presence of oxygen.

### KEY FEATURES

- Prevents polymer discoloration and loss of physical and mechanical properties
- Prevents gas fading of plastics when subjected to atmospheric pollutants
- Contains high concentration of a combination of primary and secondary antioxidants and thus requires a low dosage
- Acts as a "top up" reservoir of antioxidants in addition to those added at resin producer level which helps in following ways:
  - \* Protects polymer when subjected to multiple heat histories in re-processing and re-cycling
  - \* Helps incorporation of PIR/ PCR content in virgin polymers for meeting sustainability or economic objectives
  - \* Helps to meet critical parameters like OIT for PE Pipe applications

### DOSAGE

1 % to meet OIT requirement. of min. 20 Mins @ 200°C tested as per ASTM D 3895

### APPLICATIONS

Blown and cast films of LDPE, LLDPE such as mulch films, green house films  
Reprocessed granules Rotational moulded items HDPE pipes etc.



## PLAST FLAME RETARDANT

### MODE OF ACTION

Flame retardants retard fire in any one or more of the following ways –  
A) Chemically react and trap free radicals in gas phase to shut combustion  
B) Form a char layer over polymer in solid phase thus insulating it and preventing its availability as more fuel for fire  
C) Release water and dilute combustion process

### KEY FEATURES

- Combination of Halogenated FR and Synergist which acts in gas phase to trap free radicals
- Can achieve UL 94 V0, V1, V2 ratings as desired at different part thickness
- RoHS compliant
- Balance of cost vs performance compared with other FRs
- Intermediate blooming resistance and UV stability

### DOSAGE

25 – 30 % - may vary as per thickness and the required FR performance

### APPLICATIONS

Injection Moulded Electrical and Electronic equipment Extruded sheets and films – tarpaulins, laminated fabric, sheets Pipes Bulk Transit interior claddings

## PLAST ANTI STAT

### MODE OF ACTION

Anti-stats usually migrate to surface of plastics and make them hydrophilic which helps eliminate static charge build up on the surface.

### KEY FEATURES

- Based on long-chain alkyl phenols, ethoxylated amines, and glycerol esters such as glycerol monostearate which impart short to medium service life
- Can reduce surface resistivity of polymer surfaces up to 10 - 10 Ohm/Sq
- Prevents damage to microelectronics, prevents dust, dirt accumulation and reduces explosion risk due to static discharge in vicinity of flammable materials eg. solvents

### DOSAGE

0.5 – 6 % - may vary as per thickness, service environment and expected service life from the product

### APPLICATIONS

Injection Moulded articles Extrusion sheets and films Extrusion Blow Moulded components Injection Blow Moulded products Roto Moulded Articles



## PLAST FRESH

### MODE OF ACTION

Combined action of absorbing ethylene and also catalytically converting ethylene to ethylene oxide. This retards ripening of climacteric fruits and vegetables being dependent on ethylene for ripening. Thus the shelf life can be significantly enhanced for post-harvest handling, storage and transportation operations.

### KEY FEATURES

- Reduces rotting and spoilage during post-harvest operations
- Non-toxic and eco-friendly solution to delay the ripening process by influencing the ethylene levels of climacteric fruits and vegetables

### DOSAGE

2 – 3 %

### APPLICATIONS

LDPE, LLDPE, HDPE, PP films, pouches, moulded containers, punnets etc. which are used to store and transport fruits, vegetables, flowers and meat



## PLAST DESICCANT

### MODE OF ACTION

Chemically reacts and binds with moisture irreversibly and becomes part of the product and is stable up to processing temperatures of the polymers

### KEY FEATURES

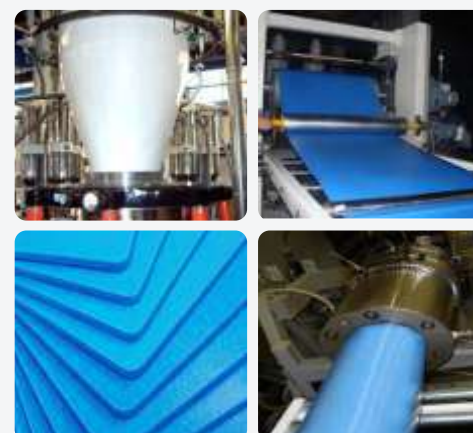
- Removes moisture introduced during polymer processing from multiple sources such as fillers, pigments and additives, recycled polymer streams of PE, PP which are washed and sorted, wet polymers or some materials stored in high humid areas
- Reduces surface defects such as lensing and fisheyes in films, bubble breakage, voids, pin holes, silver streaks in moulded articles
- Prevents loss of mechanical properties of final products such as tensile strength, elongation, impact strength and compressive strength resulting from porosity induced by moisture in final articles.

### DOSAGE

2 – 3 % - may vary as per thickness, service environment and expected service life from the product

### APPLICATIONS

Extruded blown and cast films, sheets, pipes, hoses, tapes of PE, PP  
Reprocessed granules Rotational moulded items HDPE pipes  
Injection moulded articles of PE, PP



## PLAST PPA

### MODE OF ACTION

Due to their incompatibility with other polymers and low surface energy, Fluoropolymers phase separate during extrusion and coat the metal die wall and allow the host polymer to glide over them with less friction, reducing shear stress and pressure in extruder die.

### KEY FEATURES

- Eliminate Die Build up thus increase productivity due to lesser frequency of stoppage for die cleaning
- Reduce back pressure
- Increase speed of extrusion without melt fracture and thus increasing output
- Reduce time and material required for colour changeovers
- Reduce temperature of processing and thus lower energy costs
- Improve gloss and surface finish
- Reduce polymer gels in the product

### DOSAGE

1 – 5 % depending on purpose of adding i.e. whether aesthetic appearance, productivity improvement, cost optimization etc.

### APPLICATIONS

Blown films of LLDPE HDPE Pipes, Cables and blow moulded bottles  
PP sheets, foams, cast and oriented films





## PLAST SLIP

### MODE OF ACTION

Migrates to the polymer surface and creates a lubricating effect and reduces Coefficient of Friction (COF) by reducing tackiness which helps adjacent layers to slide over each other as well as on other surfaces of converting equipment.

Non Migratory variants are also available which have a consistent slip and can meet such needs as the ability to work well at higher temperature, improve reliability, and hold coefficient of friction (COF) steady before and after laminating

### KEY FEATURES

- Helps fast and convenient post processing such as lamination, printing, labelling and packaging of films.
- Can be offered as slow acting or fast acting with optimum thermal stability to suit the end application.
- Slip masterbatches also enable torque release properties and demoulding which aid in easier removal of caps and closures threaded onto bottles and container

### DOSAGE

1 – 2 % depending on purpose of adding i.e. whether aesthetic appearance, productivity improvement, cost optimization etc. Dosage may be higher for non-migratory slips

### APPLICATIONS

Mono and Multi layer films of PE, PP and EVA



## PLAST LUBRICANT

### MODE OF ACTION

Based on Ultra High Molecular Weight Siloxane provides long lasting lubrication to the polymer surfaces.

### KEY FEATURES

- For injection moulded applications it acts as an internal lubricant improving polymer flow and providing easy mould release as well as mould filling of thin, longer parts.
- The lubricant masterbatch also provides host of other benefits such as increased extruder output, reduced torque, reduced part warpage, lower energy consumption etc.
- Increase surface properties such as smoothness, gloss

### DOSAGE

1- 3%

## PLAST UV

### MODE OF ACTION

Traps free radicals generated by photo-thermo-oxidation process and prevents polymer degradation. Can also be combined with UV absorbers which convert UV light into heat and thus preventing generation of free radicals from photo-thermo-oxidation.

### KEY FEATURES

- Based on standard low molecular weight HALS OR a synergistic combination of oligomeric high molecular weight HALS
- Protects plastics from Photo-Oxidative degradation
- Based on grades selected, can offer:
  - Protection from long term heat exposure
  - Low volatility, low migration and good resistance to extraction
  - Low gas fading and low pigment interaction
  - Indirect food contact compliance
- Protects plastics from Photo-Oxidative degradation

### DOSAGE

2 – 6 % depending upon substrate thickness, end applications, expected service life etc.

### APPLICATIONS

End applications of PE,EVA PP and PP elastomer blends for thin and thick sections such as Injection moulded items, blown and cast films – mulch films, green house films, extruded tapes, fibres, tarpaulin sheets Rotational moulded items Injection and Extrusion Blow moulded products Nonwoven agricultural covers



## PLAST ANTI SCRATCH

### MODE OF ACTION

The masterbatch reduces the Coefficient of Friction between the plastic surface and the source of scratch eg. sharp metal objects like ignition keys, finger nails and thus minimizes the surface whitening which is visible as scratches.

### KEY FEATURES

- Preventing the polymer surface from marring and scratches in various moulded applications such as automotive interior trims, door panels, centre consoles, dashboards as well as household appliances and electronics
- The masterbatch has properties being non migratory, low odour, low VOC, non tacky feel and is effective at low loadings

### DOSAGE

1 – 3 %

### APPLICATIONS

Injection Moulded PP components for automotive, household appliances and electronics. PP sheets



## PLAST VCI

### MODE OF ACTION

They act by:

- Depositing onto bare metal surfaces by displacing water molecules
- Reacting with water molecules to neutralize the acidic components responsible for corrosion
- Maintain an alkaline pH in the vicinity of the metal preventing corrosion which occurs at acidic pH.

### KEY FEATURES

- Based on Organic chemicals which vapourize at constant rate from the packaging material used to pack the components
- They act by:
  - Depositing onto bare metal surfaces by displacing water molecules
  - Reacting with water molecules to neutralize the acidic components responsible for corrosion
  - Maintain an alkaline pH in the vicinity of the metal preventing corrosion which occurs at acidic pH.
- Formulated to meet ASTM B 117 OR German Military Standard TL 8135-0002
- Free of nitrites and secondary amines
- Impart clean surface to work unlike oil and grease anti-corrosive treatments

### DOSAGE : 2 – 6 %

### APPLICATIONS

Extrusion – blown and cast films and laminates of LDPE, LLDPE, HDPE, PP Can also be incorporated into protective packaging like foam and bubble sheets



## PLAST ANTI SLIP

### MODE OF ACTION

Usually based on inorganic actives, it creates micro-roughness on film surfaces which increases Coefficient of Friction (COF) which prevents slippage of polymer films in contact with each other. It can also be based on organic actives in special cases.

### KEY FEATURES

- Useful for preventing slippage of bags including big woven sack jumbo bags over each other while stacking and transportation
- Also helps to increase stacking height without risk of slippage and resulting damage.
- It can also be used to create anti-skid surfaces

### DOSAGE

1 – 3 %

### APPLICATIONS

HDPE / PP Extruded Tapes for woven fabrics Injection, Blow, Roto Moulded PE and PP parts requiring anti-skid surfaces





## PLAST BRIGHT

### MODE OF ACTION

Act on fluorescence mechanism i.e. they absorb light in UV range of 340 – 370 nm and re-emit that light in blue wavelengths of visible spectrum i.e. 420 – 470 nm.

### KEY FEATURES

- Help to hide ageing / yellowing characteristics of plastics as they increase the brightness and gloss of plastics
- They also improve colour strength, gloss and brightness in pigmented systems

### DOSAGE

1 – 2 %

### APPLICATIONS

Recycled PE and PP applications as well as virgin films and fibres



## PLAST NUCELATING AGENT

### MODE OF ACTION

Promotes crystallization of semi-crystalline polymers and functions by presenting a heterogeneous surface to the polymer melt, making the crystallization process more thermodynamically favourable. As a result, the crystallization temperature of the polymer from the melt is increased, as are the rate of nucleation and overall rate of crystallization.

### KEY FEATURES

- Promote the formation of smaller and more numerous spherulites, often giving enhanced properties such as flexural modulus and heat deflection temperature (HDT)
- Offer other quality improvements such as elimination of warpage, sink marks, ejection pin marks, voids and deformations during mould release reduces or eliminate reject due to
- Highest quality parts at the fastest possible production rates possible due to (A) Higher Peak Crystallization Temperature (Tc) (B) Shorter Isothermal Crystallization Half-Time @ Isotropic shrinkage (D) Reducing the need to make colour-specific machine adjustments to correlate with colour specific crystallization temperatures.

### DOSAGE : 3% - 6%

### APPLICATIONS

PP homo and copolymers Injection Moulding – regular and Thin wall moulding Extrusion thermoforming Automotive, Appliances, Material handling, Caps and Closures, Trays and Cups

## PLAST ANTI RODENT

### MODE OF ACTION

Dissuades rodents from attacking plastics by emitting actives which are highly disliked by rodents. Also contain highly bitter compounds discouraging rodents from gnawing and biting plastics.

### KEY FEATURES

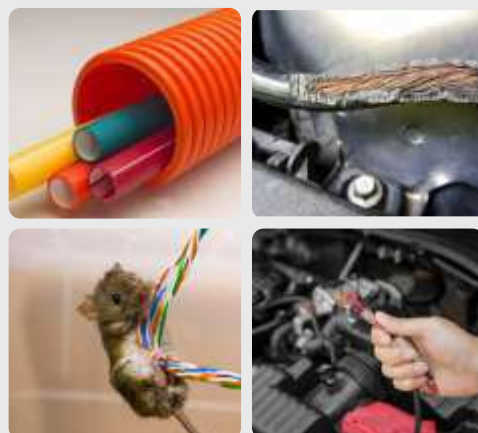
- Based on a formulation of various non – toxic repellent chemicals (unlike copper naphthenate which kills) which do not kill rodents but dissuade them
- Contain a combination of highly odoriferous and bitter compounds whose smell is highly disliked by rodents or give them an olfactory recall of a predator in vicinity inducing them to escape
- Also contain highly bitter compounds which would deter them to chew the plastic surface again. Rodent species pass on such unpleasant experiences to their progeny and thus gradually they would not attack plastics added with Rodent repellent masterbatches

### DOSAGE

3 – 4 %

### APPLICATIONS

Typical applications are wire and cables, pipes and ducts, warning tapes, geo membranes, auto components, technical textiles used for protecting food grains etc.



## PLAST CLARIFIER

### MODE OF ACTION

Clarifiers are typically melt-sensitive nucleating agents which form a continuous, fibrous "gel network" that promotes fine nucleation throughout the resin upon cooling which creates a large surface area on which very fine spherulites form. The spherulites that are created are small enough to allow light waves to pass without scattering them, bringing high transparency

### KEY FEATURES

- Excellent transparency due to melt blendable nature
- Promote the formation of smaller and more numerous spherulites, often giving enhanced properties such as flexural modulus and heat deflection temperature (HDT)
- Offer other quality improvements such as elimination of warpage, sink marks, ejection pin marks, voids and deformations during mould release reduces or eliminate reject due to
- Highest quality parts at the fastest possible production rates possible due to (A) Higher Peak Crystallization Temperature (Tc) (B) Shorter Isothermal Crystallization Half-Time (C) Isotropic shrinkage (D) Reducing the need to make colour-specific machine adjustments to correlate with colour specific crystallization temperatures.

### DOSAGE : 3 – 4 %

### APPLICATIONS

PP homo and copolymers Injection Moulding – High thickness regular and Thin wall moulding Extrusion thermoforming Automotive, Appliances, Material handling, Caps and Closures, Trays and Cups



## PLAST ANTI TERMITE

### MODE OF ACTION

Dissuades termites from attacking plastics by emitting actives which are highly disliked by termites. Also contain highly bitter compounds discouraging termites from biting and colonizing plastics.

### KEY FEATURES

Based on a formulation of various non – toxic repellent chemicals which are low odoriferous and highly bitter compounds which dissuade the termites from biting the plastics sheathing or other surface again

### DOSAGE :

3 – 4 %

### APPLICATIONS

the most common requirement for anti- termite is to protect fibre optic communication cables consisting of HDPE outer sheathing which is susceptible to attack by termites. Other applications are wire and cables, pipes and ducts, warning tapes, geo membranes etc.



## PLAST OXO BIO

### MODE OF ACTION

Based on pro-degradant and pro-oxidant additives which when incorporated in single use and disposable plastics aid in breaking the long polymer chains into short segments.

### KEY FEATURES

- These short oxidized segments are functionalized sites and micro-organisms can colonize and latch onto these segments and can metabolize and consume them as food sources.
- The resultant end by-products are carbon dioxide, water and degradable organic matter called humus which can be assimilated in the natural environment.
- Non Toxic in nature

### DOSAGE : 1 – 2%

### APPLICATIONS

Single use plastics made from PP, PE and PS such as disposable ware, garbage bags, expanded Polystyrene cups, plates, clamshells, mulch films etc.



## PLAST ODOUR NEUTRALIZER

### MODE OF ACTION

Acts by oxidation of odour creating substances or their adsorption

### KEY FEATURES

Removes odours from recycled polyolefins having residual organic and degraded contaminants not removed during their cleaning or also remove odour from virgin polymers

### DOSAGE

3 – 4 %

### APPLICATIONS

PE, PP Injection moulded containers, extruded sheets and films, rotational moulded articles from recycled and virgin polymers



## BLACK MASTERBATCHES

### PLAST BLACK PRM

### KEY FEATURES

- Excellent dispersion and process ability, good gloss and high jetness
- Low ash and sulphur content and blue undertone and effective UV stability.

### APPLICATIONS

- Blown monolayer and multilayer films for general purpose packaging, agricultural mulch film, silage, low denier and high line speed woven sack Non Wovens applications.
- High quality black injection mouldings for home appliances, stationery articles etc. where aesthetic appearance of gloss and jetness is desired
- Fibres / Non WOVENS and monofilaments for high jetness and with no interruptions and fibre breakage.

DOSAGE 1 – 5 %

## PLAST FRAGRANCE

### MODE OF ACTION

Fragrance molecules embedded in plastics vapourize and get emitted to fill the surroundings with fragrance

### KEY FEATURES

- Creates a sensory appeal for plastics which can influence customer purchase decision
- Masks or adsorbs unpleasant smell and odours and gives a fresh feel to create customized signature experience for a better brand recall

### DOSAGE

2 – 3 % depends upon thickness of articles, surroundings, expected service lifetime

### APPLICATIONS

Injection and blow moulded articles of PE, PP and EVA as well as blown film applications like garbage bags and bin liners



## PLAST BLACK

### KEY FEATURES

Regular black masterbatches for general purpose applications providing good balance of performance and economics

### APPLICATIONS

Agricultural pipes and drip irrigation systems, rotational moulded tanks, crates and bulk handling moulded items such as trash bins, garbage bags, reprocessed polymer applications for general purpose film and moulding applications.

### DOSAGE

1 – 5 %



## PLAST TRANSPARENT COLOURS

### MODE OF ACTION

Fine dispersions of regular pigments converted to nano scale and grafted onto a micro base imparting high tinctorial strength and depth .

### KEY FEATURES

- Being pigments and not dyes, the transparent masterbatches are light fast, have good heat stability and good resistance to migration
- Good balance of desired transparency and economics than other transparent pigment masterbatches
- Currently available in six primary colours namely Red (48-2), Yellow (83), Blue (15-1), Green (7), Orange (23), Violet (23) and are compatible with each other

DOSAGE : 1 – 2%

### APPLICATIONS

PE and PP high end furniture, automotive colours, lightings, household items such as home appliances, blow moulded bottles, toys etc.



## WHITE MASTERBATCHES

### PLAST WHITE PRM

### MODE OF ACTION

- Highly loaded (up to 75 %) premium TiO<sub>2</sub> masterbatches
- Premium high opacity and maximum whiteness index.
- Food grade
- Have good dispersion and process ability, are weather fast and non-yellowing, non pinking varieties (with bluish undertone if desired).

### APPLICATIONS

- Thin gauge films with low loadings.
- Premium white applications like home appliances, consumer durables

DOSAGE 1 – 5 %





## PLAST WHITE

### KEY FEATURES

Optimum balance of opacity, whiteness index, good dispersion and economics

### APPLICATIONS

PE and PP Injection and blow moulded containers, rotational moulded tanks, sheets and films, tarpaulins, woven raffia tapes Non wovens , mono filaments etc.

### DOSAGE

1 – 5 %



## PLAST STIFFENER

### KEY FEATURES

- Improves strength, stiffness, and uniform flow
- Saves energy and processing costs
- Improves thermal stability and reduces flow variation

### APPLICATIONS

PE and PP highly filled systems such as films and sheets, mouldings, speciality unfilled applications such as multilayer – mono family films

### DOSAGE

1 – 5 %

# SPECIALITY COMPOUNDS

## PLAST CONDUCTIVE CARBON BLACK

### MODE OF ACTION

Fine dispersions of regular pigments converted to nano scale and grafted onto a micro base imparting high tinctorial strength and depth .

### KEY FEATURES

- echno-commercially viable option to enhance the static dissipative and conductive property of polymers
- In addition to the electrical performance, our conductive carbon black masterbatches provide excellent gloss, dispersion and smooth process ability without any issues
- Optimal loading and a good balance of mechanical properties such as rigidity and toughness

### APPLICATIONS

- ESD Packaging for Electrical and electronic components
- Plastics employed in conveying flammable liquids to minimize risk of fire if accumulation of explosive dust is a possibility OR flammable gases are present in vicinity
- Material Handling crates, trays and other equipment in facilities manufacturing sensitive microelectronics



## PLAST ANTI SPLIT

### KEY FEATURES

- Improves melt strength and stiffness of final product made from highly filled systems
- Prevents the splitting of tapes and fibrillation and helps for smooth processing and uninterrupted production

### APPLICATIONS

PE and PP highly filled systems such as films, fibres, tapes

### DOSAGE

5 – 50 %



# VALUE ENHANCERS

## PLAST MODIFIER

### KEY FEATURES

Improves mechanical properties in highly filled and recycled polyolefins such as elongation, impact strength, gloss, process ability, anti-splitting in tapes etc.

### APPLICATIONS

In PE, PP EVA - this can be combined with minerals to optimize cost and performance in extrusion, injection and blow moulding and rotational moulding processes used for manufacturing diverse products.



# COLOUR MASTERBATCHES

## PLAST COLOUR

### KEY FEATURES

- Good opacity and high tinctorial strength at optimized dosages
- Based on RAL or PANTONE shade card numbers
- Special metallic effects like silver, gold can also be offered

### DOSAGE

1 – 10 %

### APPLICATION

Extrusion blown film, Sheet, Pipe, profile injection moulded components blow moulded articles slit films, mono filaments fibers & Non wovens roto molded articles etc.

