## WHAT ARE FILLER MASTERBATCHES

If you manufacture woven sacks, FIBC, tarpaulin, or injection/blow moulded articles, you are probably familiar with the use of filler masterbatches.

Filler masterbatches consist of a base resin, which is normally polypropylene (PP) or polyethylene (HDPE/LDPE/LLDPE), along with a mineral component such as calcium carbonate or talc. Apart from these, premium fillers also include high-value additives such as antioxidants, dispersion aids and other functional aids. These ingredients are compounded and extruded together into a pellet form which can be easily and homogenously mixed with the customer's other raw materials.

Apart from reduction in cost, filler masterbatches also provide the following benefits:

- Anti-fibrillation properties
- Improved thermal conductivity of the polymer
- Improved flexural modulus
- Increase in stiffness
- Lower shrinkage
- Improved dimensional stability
- Higher heat distortion temperature under load
- Easier printing due to reduction in minimum seal temperature

Although use of fillers in plastics has grown tremendously over the past years, there is still a dearth of quality filler masterbatches, especially in central India. Most filler manufacturers employ crude processes and raw materials to produce filler masterbatch, which inevitably affects the quality of the customer's final product.

Masterplast India was set up with the aim of filling the gap in availability of high-quality fillers in the region. We have a three-fold approach for ensuring quality and value-addition to our customers:

- Using the latest technologies in compounding and state-of-the-art equipment to ensure consistency in quality.
- Maintaining a stringent policy for procuring only the highest quality of raw materials.
- Adding value to the customers' final product by using high performance additives.

## A P P L I C A T I O N S

Common applications include:

**WOVEN SACKS**

**BLOWN FILM**

**FIBC**

**BOX STRAPPING**

**TARPAULIN**

**INJECTION MOULDING**

## THE MASTERPLAST ADVANTAGE

At Masterplast, we take quality very seriously. Given the trend for higher and higher loadings of filler masterbatch in raffia and related applications, even the slightest variation in quality can lead to line stoppages and wastage, which adds to the hidden costs of the customer.

Therefore, we strive to use the best ingredients and latest technologies to ensure that our product performs to the exacting standards that we promise.

Here's what makes our quality stand out:

### CONSISTENCY

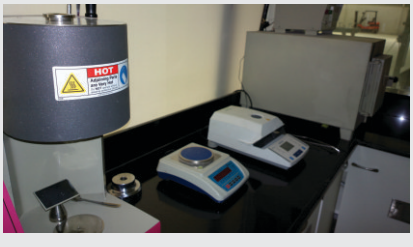
Instead of pre-mixing the ingredients before extrusion, we follow the split-feeding route normally used for making expensive colour masterbatches. Gravimetric (loss-in-weight) feeders provided by Brabender®, Germany, feed the ingredients directly into the melt flow in the exact ratio decided by the operator. This method practically eliminates variations in the polymer content that arise during pre-mixing, and prevents sudden breakages or loss of strength in the extruded sheet/tapes.

Underwater pelletizing technology from BKG®, Germany, ensures that each pellet is a uniform, round shape, which allows homogeneous mixing with other raw materials.

### HIGHER LOADING

We use only the highest quality of raw materials from all over the world in order to deliver consistently good quality. Our highly controlled parameters allow for a higher loading* compared to any other manufacturer.

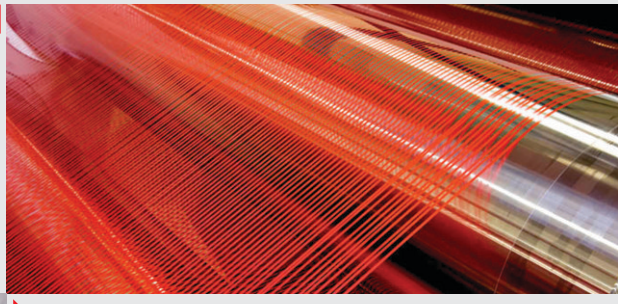
*up to 50%, depending upon application



## HIGHER OUTPUT

Nearly 50% of our resin base consists of a special grade of high-MFI impact-copolymer, which allows us to improve melt flow characteristics without compromising on material strength or finish. This allows you to increase output of the line without increasing torque or machine stress.

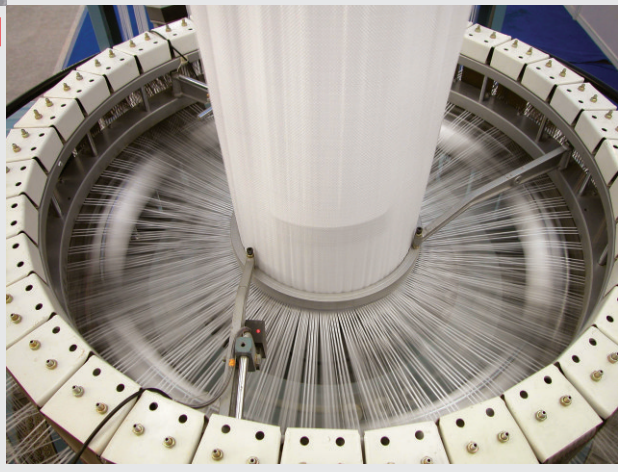
We also add hydrophobic compounds which drastically reduce water-carry-over (WCO) effect in high-speed tape lines.



## NO REPROCESSED POLYMER

We have a stringent policy for not using any Reprocessed Polymer (RP). Using Reprocessed Polymer may allow reduction in cost, but can lead to deterioration of the extruder screw and loss of control over process parameters. Therefore, we use only 100% virgin polymer.

## VALUE ADDITION

Apart from the resin base and mineral filling, we add several high performance additives which add value to the final product. Some of these are:

- Internal and external lubricants for reducing friction and torque during processing.
- Bonding aids for better strength and elongation of tapes.
- Secondary antioxidants for preventing material degradation during processing.
- Primary antioxidants for preventing yellowing/ degradation of the final product over its life.