

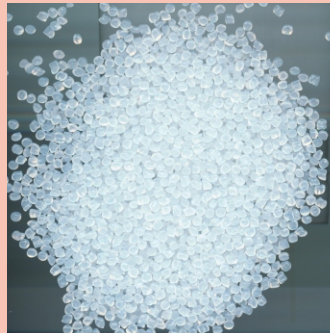


# RAJIV

## Additive Solutions for the Plastics Industry

Rajiv Plastic Industries has a wide range of masterbatches containing a variety of additives. These additive masterbatches provide the processor a means of metering precise quantities of the active ingredients such as:

- Antistatic
- Antioxidants
- Light Stabilizers
- Nucleating Agents
- Anti - Warp Agents
- Slip and Antiblock Agents
- Antimicrobials
- Chemical Foaming Agents



Usually only a small addition of these additives is required in the polymer to reach the desired effect. Hence, they need to be dispersed very well using a suitable carrier material

**Antistatic Masterbatches** - These are designed to prevent a buildup of static electricity in plastics. Polymers by nature have very good insulating properties but these very properties may lead to a number of handling and other problem. Static charge may result in clinging of sheet and film, sticking of stacked polystyrene cups, attract dust and dirt. Also, a sudden discharge can create sparks that may damage electronic components and can be an explosion hazard.

**Antioxidant Masterbatches** - These are usually organic compounds that slow down or completely stop polymer degradation due to oxidation. Degradation in the form of discoloration, change in viscosity, surface crazing, loss of physical and mechanical and optical properties can be avoided by the use of anti oxidants. These situations usually arise due to exposure of the polymer at elevated temperature during processing or due to long term exposure to the environment. These antioxidants can be classified as primary antioxidants and secondary antioxidants depending on their stabilizing effect in the life span of the polymer.

**Nucleating & Clarifying Agent Masterbatches** - These are usually sorbitol based organic compounds and improve the clarity of semi-crystalline polymers like polypropylene by restructuring of the molecules during the processing stage, thereby affecting only the optical properties.

**Anti Warp Masterbatches** - Warpage is usually seen in semi crystalline materials like PP, PE and Nylons. These compounds improve the dimensional stability of the molded components and reduce warpage.

**Light Stabilizer Masterbatches** - These stabilizers extend the life of polymers by inhibiting degradation caused by various light sources. These can be further divided in to UV Absorbers and UV Stabilizers. Usually a combination of the two gives the best results and better longevity under light exposure.

**Slip and Anti-Block Masterbatches** - Also known as release agents these prevent adherence of thin films to metals and to each other usually due to the accumulation of static charge on the surface.

**Foaming Agent Masterbatches** - These are compounds which decompose at elevated temperatures forming gas and other inert components that expand the plastic material giving it a cellular structure. This process offers weight reduction, better acoustical properties, better insulation as well as cost savings. These can be further divided into exothermic foaming agents and endothermic foaming agents. Exothermic foaming agents are usually used for larger parts while endothermic foaming agents can be used for tapes film sheet and removal of sink marks for in molded parts.

**Anti Microbial Agent Masterbatches** - These protect materials against fungal and bacterial attack. Very effective against both - gram positive and gram negative microbes.

**Anti Sink Masterbatches** - These work on the principle of foaming agents. They are very effective in removal of sink marks especially in areas over ribs and give completely flat parts.

### Rajiv Plastic Industries

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