



# MB50-001

## Silicone Masterbatch

DuPont MB50-001 Masterbatch is a pelletized formulation containing 50% of an ultra-high molecular weight (UHMW) siloxane polymer.

It is designed to be used as additive in polypropylene compatible systems to impart benefits such as processing improvements and modification of surface characteristics. Liquid siloxane plastic additives have been used for several years to improve the lubricity and flow of thermoplastics. They are effective in this role, although until now some difficulties have been experienced in the incorporation of liquids into thermoplastic melts without use of specialized equipment. It has also been difficult to produce masterbatches with greater than 20% liquid siloxane because of processing difficulty and bleed problems.

The DuPont MB Series Masterbatches address these problems by supplying a high concentration of an ultra-high molecular weight (UHMW) siloxane as dispersion in a dry pellet form in a variety of thermoplastics.

### Applications

Additive in polypropylene compatible systems.

### Benefits

When added to polypropylene or similar thermoplastics at 0.2% to 2.0%, improved processing and flow of the resin is expected, including better mold filling, less extruder torque, internal lubrication, mold release and faster throughput. At higher addition levels, 2% to 10% improved surface properties are expected, including lubricity, slip, lower coefficient of friction, and greater scratch, mar and abrasion resistance. A study evaluating paintability showed no adverse effects in polypropylene with up to 5% ultra-high molecular weight siloxane added, as demonstrated in Table 2.

The DuPont MB Series Masterbatches are expected to give improved benefits compared to conventional lower molecular weight siloxane additives, e.g., less screw slippage, improved release, a lower coefficient of friction, fewer paint and printing problems, and a broader range of performance capabilities.

### Product information

Colour	White -	
Polydimethylsiloxane content	50 %	PhEur 1470

### Other properties

Recommended use level	0.2 - 10 %
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### Storage and stability

Shelf life	48 months
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### Characteristics

Compatibility	Polyolefins
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Food contact

FDA 21 CFR

### Additional Information

How to use

DuPont MB Series Masterbatches may be processed in the same way as the thermoplastics on which they are based.

Sufficient DuPont MB50-001 Masterbatch should be blended with virgin polymer pellets to give the desired siloxane level in the final product.

DuPont MB50-001 Masterbatch pellets can be added during compounding in a single screw extruder or added at the feed hopper during injection molding or extrusion.

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