



DOW CORNING

Plastics and Rubber  
Solutions



## Dow Corning® MB25-035 Masterbatch

*Long-lasting, cost-effective slip performance  
for form-fill-seal packaging*

### Features

- Low dynamic COF at low loadings (example: 0.2 COF in film against steel at 3 percent masterbatch loading)
- Provides longer-lasting slip performance during/after thermal aging than organics, which can degrade at elevated temperatures
- Non-migrating across film layers
- U.S. Food & Drug Administration (FDA) and European Union (EU) 10-2011 food contact compliant
- Easy dosing
- No die build-up or gel deposition during extrusion



High-speed, high-volume form-fill-seal (FFS) packaging operations place stresses on low-density polyethylene (LDPE) film, including increased levels of surface friction. Reducing coefficient of friction (COF) is critical to seamless throughput, high productivity and consistent quality. *Dow Corning*® MB25-035 Masterbatch provides exceptional slip performance while overcoming the drawbacks of organics. Equally important, it helps to control costs.

Traditional organic slip additives, including erucamide and oleamide, rapidly migrate to the film surface and dissipate in a short period of time. Because they migrate so easily, they transfer between film surfaces during rolling and storage, from one film layer to another and from film to package contents, increasing the risk of food contamination. They also lose effectiveness under elevated temperatures, such as exposure to hot foods.

*Dow Corning*® MB25-035 Masterbatch eliminates these issues by retaining excellent COF reduction values without migration for an extended period (for instance, during long-term storage before use), far surpassing any other technology on the market today.

From a cost-efficiency standpoint, *Dow Corning*® MB25-035 Masterbatch offers several advantages. First, it is effective at low loadings. Second, it can be incorporated only in the outer layer of multi-layer films (unlike organics, which are added to all layers),

## Advantages

- Reduces friction to enable higher throughput and productivity in FFS packaging
- Delivers long-lasting stability to maintain slip performance during delays between film extrusion and FFS operations
- Avoids quality issues by preventing migration of slip additive between film layers or into package contents
- Optimizes processing with smooth dosing and homogeneous dispersion
- Controls costs with lower loadings and use in only the outer layer of multi-layer film

## Target Applications

- Low-density polyethylene (LDPE) resins and blends used for blown film in FFS operations
- Linear low-density PE (LLDPE) for FF and lamination operations

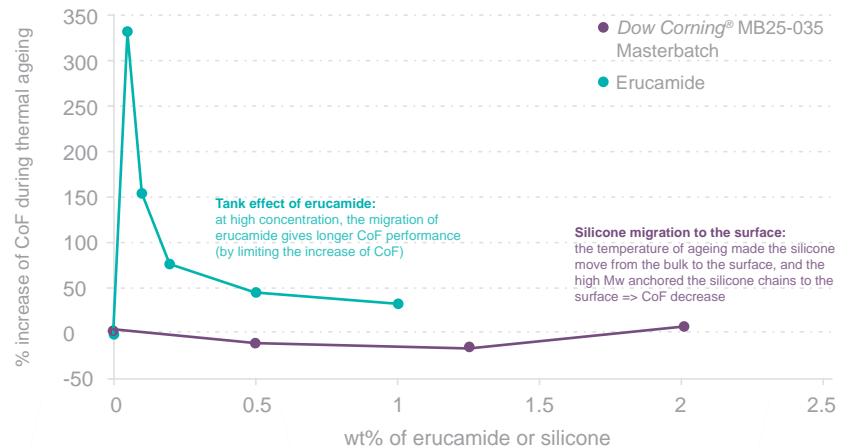
## Target Customers

- Film producers for FFS packaging
- Polyethylene resin producers of ready-to-use compounds for FFS film producers

so less is needed. Finally, it is based on a standard LDPE grade for packaging film to ensure perfect homogeneity that optimizes performance of the slip additive. With this product, the market finally has a cost-effective way to improve film properties.

In film processing, the masterbatch pellets do not stick together, and therefore feed smoothly into the extruder. The formulation also prevents die build-up and gel formation.

Increase of CoF (in %) during thermal ageing (120h 60°C)  
LDPE monolayer blown film 40µm



**Tank effect of erucamide:**  
at high concentration, the migration of erucamide gives longer CoF performance (by limiting the increase of CoF)

**Silicone migration to the surface:**  
the temperature of ageing made the silicone move from the bulk to the surface, and the high Mw anchored the silicone chains to the surface => CoF decrease

## Many Solutions. One Source.

A longtime global leader in developing innovative silicon-based solutions, Dow Corning offers a variety of Plastics and Composites Solutions. Our additive and ready-to-use solutions help solve your needs in terms of processing, reinforcing materials and enhancing properties. From fluids to pellets, we help simplify the access to the uniqueness of silicone technology.

To learn more about the wide range of Plastics and Composites solutions from Dow Corning, visit [dowcorning.com/plascomp](http://dowcorning.com/plascomp), email the Plastics team on [plastics@dowcorning.com](mailto:plastics@dowcorning.com) or go to [dowcorning.com/ContactUs](http://dowcorning.com/ContactUs) for a contact close to your location.

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