

**Go green and  
save money!**

**Use Filolen®**  
Ground Calcium Carbonate (GCC) Masterbatches

### For Polyethylene Film Applications

#### End Product Benefits

- Savings in polymer cost
- Improved dart drop, stiffness and tear resistance properties  
Down gauging possible without loss of properties
- Improved stress-cracking resistance
- No negative effect on light ageing resistance of polyethylene
- Improved barrier properties. Reduced water vapour and oxygen permeability. Especially important for fresh food packaging
- Improves ink receptivity. Easier to print with water based inks
- Increased opacity. Savings in white pigments
- Easier film welding (improved heat sealability) due to increased thermal transfer
- Faster shrinkage due to higher thermal conductivity
- Antiblocking effect
- Soft touch, velvet-handle effect Applies mainly for products containing finer calcium carbonate
- Antislip effect. Improved stacking stability of bags. Applies mainly for products containing coarser grades of calcium carbonate

#### Processing Benefits

- Increased extruder throughput
- Faster heating in the extruder
- Improved bubble stability and faster cooling
- Reduced static build up

#### Environmental Benefits:

- Reduced carbon footprint
- Accelerated film degradation
- Lower energy consumption due to the high thermal conductivity of GCC

#### What makes Filolen® special:

- Exceptionally low abrasivity for longer service life of screws, barrels and cutting equipment.  
Surface coated GCC contained is graded 2.5 on the Mohs scale
- Superb dispersion quality for trouble free processing in thin film and best mechanical properties,  
controlled by filter pressure rise test and film production
- Excellent whiteness due to the GCC used
- High purity. Extremely low Fe<sub>2</sub>O<sub>3</sub> content (0.01% max in GCC)

## Range of Filolen® Masterbatches for Film Applications

### "X" Series

Filolen "X" Series are based on a specially selected for film applications ethylene copolymer carrier, which offers the following benefits:

- Increased melt strength, which leads to stable extrusion process
- Reduced powder formation on the film surface
- Improved surface gloss. Partially offsets the matting effect of calcium carbonate
- Improved sealability

For best performance, and due to the carrier melt processing behaviour, temperature should be reduced by 5 - 10°C in all zones, apart from the die where it should be raised by 10 - 20°C.

### FX-1750

The top performer of Filolen products Aims at the most demanding thin film applications Contains 75% of super fine coated GCC (median particle size 1.9µm) in an ethylene copolymer. Maximum improvement in impact and tear strength, and flexibility due to the small particle size of GCC and the polymer used

Best soft touch effect and surface smoothness

Exceptional whiteness, minimises addition of white masterbatch

Little or no film weight increase due to the small particle size of GCC

Can be used in blown and cast LDPE, LLDPE, and HDPE film applications

Usage level 25-60% depending on film thickness and mechanical properties required, 40% in HDPE or LLDPE for smooth surface finish paper-like film

### FX-0800

Contains 80% of fine coated GCC (median particle size 3.7µm) in an ethylene copolymer.

Economical product specially designed for film applications

Can be used in blown and cast LDPE, LLDPE, and HDPE film applications

Usage level 10-40% depending on film thickness and mechanical properties required, 40% in HDPE or LLDPE for medium roughness paper-like film

### FL-0800

Contains 80% of fine coated GCC (median particle size 3.7µm) in LLDPE.

Recommended for blown HDPE, LLDPE and LDPE films. Usage level 5-30%

### FE-0800

Contains 80% of fine coated GCC (median particle size 3.7µm) in LDPE. Good Flexibility

Recommended mainly for blown LDPE film or blends with LLDPE. Usage level 5-30%

### FE-2850

Contains 85% of fine coated GCC (median particle size 5.0µm) in LDPE.

For maximum economy. Usage level 5-30%

### FE-3700

Contains 70% coarse GCC (median particle size 6.5µm) in LDPE.

Offers anti-slip properties at very low addition level due to high coefficient of friction. Designed for the production of film with a rough handle. Usage level 1 - 3% for antislip properties, 40% in blown HDPE or LLDPE for very rough paper-like film



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