

# TRILSPERSE™ 800

## Dispersing Aid for Color Masterbatch and Highly Filled Polymers

- Improves filler to polymer bonding
- Increases MFI and decreases viscosity
- Improves physical strength
- Improves color strength
- Reduces agglomerates
- Produces better looking product
- Saves cost

- Make Better and More Efficient Masterbatches
- Compound with Higher Filler Levels

**TRILSPERSE 800** is a dispersing additive for highly filled and color masterbatches. Effective in polyolefins, PET, PS, ABS, TPO and TPE resins. Will allow retention of good physical properties, improve color strength while dramatically improving process ability. Use as a substitute for PE waxes, stearates and acrylic polymers traditionally used to disperse fillers and pigments.

Almost all problems associated with high filler loading are attributable to filler/polymer interaction. Dispersants are required to compatibilize these interfaces. TRILSPERSE 800 is a state-of-the-art amphiphilic functional hydrocarbon with highly polar groups that have a very strong affinity to fillers. TRILSPERSE 800 will very efficiently wet out and bond the filler interface with the polymer matrix with dramatic strength. This strong molecular bonding will reduce compound viscosity, improve processability, improve color strength, reduce agglomerates, and reduce surface defects. Use rates vary depending on effect and filler/pigment loading. Normal use range is 0.1-2%.

### Use to Disperse:

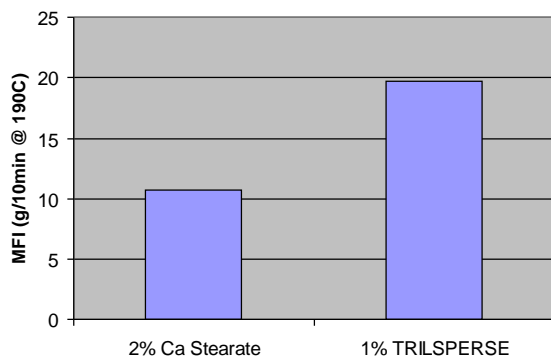
CaCO <sub>3</sub>	MgOH
Inorganic Pigments	Talc
Organic Pigments	TiO <sub>2</sub>
Silica	Glass
Flame Retardants (ATH, MDH)	

### Other Observable Effects:

- Lower Filter Pressures
- Less Die Build Up
- Lower Die Swell
- Improved Surface Lubricity
- Improved Release Properties
- Improved Anti-blocking
- Faster Cycle Times
- Non-Blooming
- Less Mould Shrinkage

### LLDPE Highly Filled with Calcium Carbonate

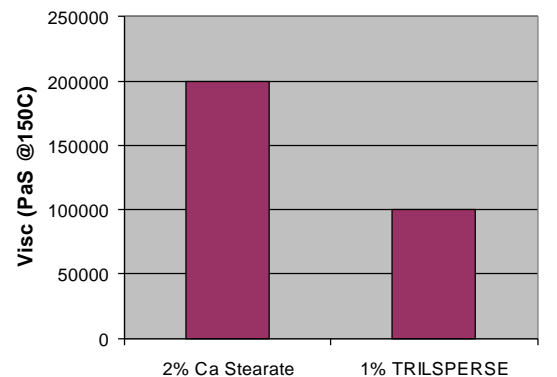
**TRILSPERSE 800 vs Ca Stearate**  
70% CaCO<sub>3</sub> LLDPE MI 50



Formulate with higher filler loadings by improving flow and processability without harming physical properties.

More efficient than stearates, PE wax and acrylates.

**TRILSPERSE 800 vs Ca Stearate**  
70% CaCO<sub>3</sub> LLDPE MI 50



Physical Form : Off White Micro beads  
Melting Point : 110°C ±10  
Flash Point : >290°C

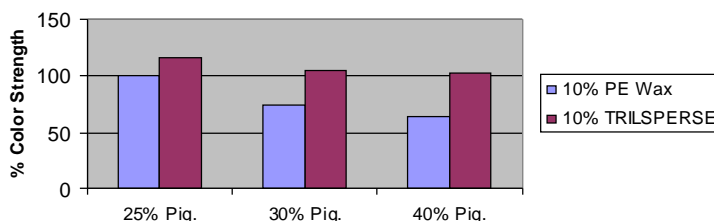
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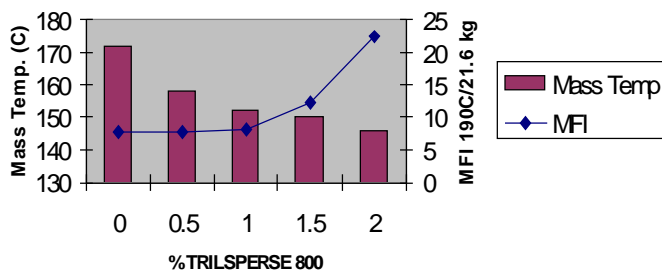
## Dispersing Aid for Color Masterbatch and Highly Filled Polymers

**TRILSPERSE 800** used to replace a standard PE Wax in phthalocyanine blue/LLDPE masterbatch shows that as pigment content increase the ability of TRILSPERSE 800 to render better color strength increases. The rate of re-agglomeration and viscosity are also lowered in this application. This results in improved processing, better quality finished products and can save on pigment and process costs.

**Effect of TRILSPERSE 800 on Color Strength of Phthalocyanine Blue LLDPE(MI 50) Masterbatch**



**Process Effect of TRILSPERSE 800 on 40% Carbon Black Masterbatch**



**TRILSPERSE 800** can have dramatic effects at low addition levels when used as a dispersant and flow additive in a carbon black masterbatches. The masterbatch will also be easier to disperse during compounding and produce better color strength with fewer agglomerates.

**TRILSPERSE 800** used as a dispersant to replace Ca Stearate in a 40% Talc loaded PP shows that toughness and flow properties are both improved at relatively low addition rates.

## Direct Treatment on Inorganic Fillers

**TRILSPERSE 800** can be coated directly onto inorganic fillers with simple heated blending methods. Charge a high speed mixer (800+ RPM) with filler of choice. Heat to 85-90°C and blend. Gradually add TRILSPERSE 800 to desired treatment rate. Continue mixing and raise temperature to 125-130°C. Remove, cool and package. Treatment rates should reflect surface area and desired effects. Consider amount of TRILSPERSE 800 needed to be from 0.1-2% of final polymer matrix.

Physical Form : Off White Micro beads  
 Melting Point : 110°C ±10  
 Flash Point : >290°C

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