

# Color Masterbatch Production

How to Achieve the Best Price-Performance Ratio

## Requirements In Masterbatch Processes

Easy cleaning for quick change of recipes



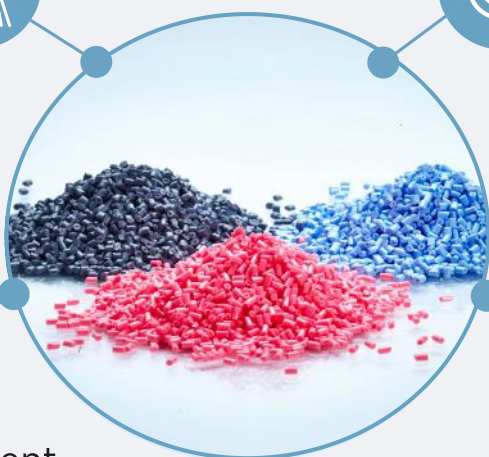
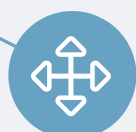
Intensive homogenization in the twin screw extruder for color pigment dispersion and high product quality



High reliability for consistent product quality



High flexibility for different process requirements and batch sizes



## Masterbatch Mechanism

### Compounding Process

Wetting of the pigments



Shearing the pigments from  $D_o$  to  $D_t$

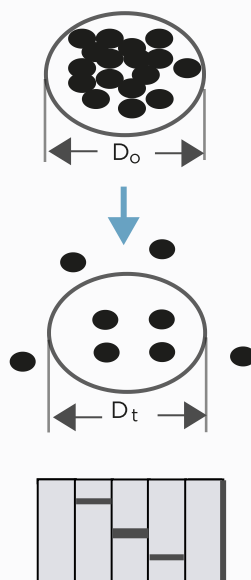


Mixing and distributing the pigments into the carrier

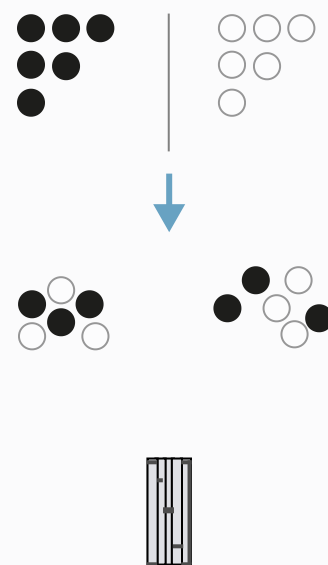


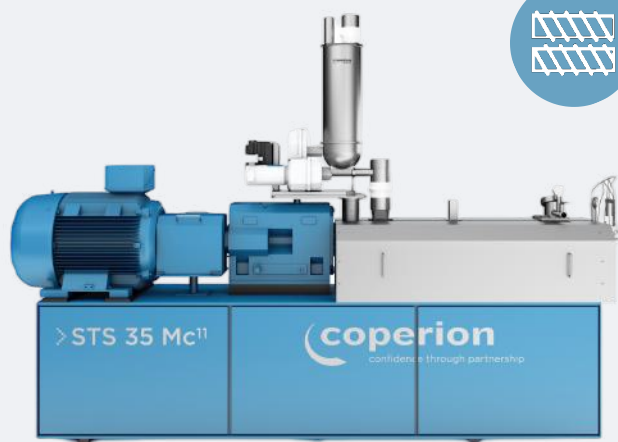
Stabilization against re-agglomeration

### Dispersive Mixing



### Distributive Mixing





## STS 35 Mc<sup>11</sup> Twin Screw Extruder in Masterbatch Design

- Screw diameter of 35 mm [1.38 in]
- Max. specific torque of 11.3 Nm/m<sup>3</sup> and throughput rates up to 300 kg/h
- $D_o/D_i = 1.55$  (outer to inner screw diameter) - across the entire STS Mc<sup>11</sup> series (identical to ZSK Mc<sup>18</sup> series)
- Compact design, dust-free and easy to clean thanks to smooth surfaces
- Water supply and electrical wiring are integrated and physically separated in the base frame
- Feed hopper in quick-change design for fast disassembly
- Self-cleaning

## S60 Volumetric Single Screw Coperion K-Tron Feeder

- Continuous operation for consistent, accurate feeding of ingredients
- Gentle product handling of the horizontal agitator and feeding screw
- Interchangeable feeding tools
- Fast disassembly and very good cleanability of the feeder

