Mattenex™ Fiber delusterant

Liquid delustrant technology for polyester fiber processing which delivers a flexible, efficient and consistent matting aesthetic in a single product solution.
**Mattenex™ Technology description**

Mattenex™ is a new generation of non-ionic liquid TiO₂ dispersion technology which reduces the luster appearance of bright polyester fiber to create a more desirable matt aesthetic effect.

Mattenex™ is used to produce semi dull, dull and fully dull products. Compared with conventional delusterant technology, Mattenex™ requires no pre-drying and can contribute additional benefits in terms of reducing yarn friction and abrasion.

**Applications**

Mattenex™ delusterant technology is engineered for fine to heavy denier continuous filament, staple fiber, melt blown and spun bond processes. The technology can add value for a range of product applications including apparel fabrics, home and automotive textiles.

Mattenex™ adds value in processing of recycled PET flakes or regrind without a matting agent present. Addition rate can be conveniently adjusted to produce consistent matting levels for different feedstock qualities.

Used as a semi dull delusterant, Mattenex™ diffuses artificial fiber luster rendering a more natural color tone. As a dull and fully dull delusterant, Mattenex™ can impart desirable fiber properties such as high opacity, extra softness, more luxurious color, UPF 30-50+ UV protection and moisture wicking capability.

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**Usage rates**

With just one formulation, Mattenex™ covers the entire range of matting levels. Addition rate is dependent on required level of matting and is typically 30-60% lower than standard solid masterbatch technologies. Mattenex™ is generally used at 0.2-0.5% to obtain semi dull, 1.0-2.0% for dull and 2.3% or above for fully dull application.

<table>
<thead>
<tr>
<th>Matting effect</th>
<th>Typical LDR %</th>
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<tbody>
<tr>
<td>Semi dull</td>
<td>0.2 - 0.5</td>
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<tr>
<td>Dull</td>
<td>1.0 - 2.0</td>
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<tr>
<td>Fully dull</td>
<td>≥ 2.3</td>
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**Supply**

Format / Packaging: Mattenex™ delusterants are available in a variety of packaging formats, from recyclable cardboard and drum to larger IBCs. Please consult with your local ColorMatrix representative.

Minimum order / Lead time: Typically 50kg, with a lead time of five days to three weeks, dependent on location.

**Regulatory information**

Mattenex™ is suitable for use in the majority of polyester fiber applications. Regulatory information can be provided for specific applications such as healthcare and medical. Full regulatory details for your region are available on request. For further information please contact ColorMatrix Global Regulatory Department on Tel: +44 (0) 151 632 8800 or Email: regulatory@colormatrix.com.
Technology benefits
Matttenex™ offers a range of matting effects in a single product solution. As a liquid formulation, dosing is highly accurate and controllable enabling greater production flexibility and important efficiency savings.

Matttenex™ is manufactured using ColorMatrix’s advanced wet milling process where TiO₂ particles are reduced and controlled at submicron specification to ensure consistent quality and uniform dispersion of TiO₂ in products. The proprietary chemistry used in Matttenex™ prevents agglomeration of TiO₂ during processing.

Single formulation
Matttenex™ delusterant is available in highly concentrated liquid form and in a single formulation can be used for a full range of matting requirements. It is entirely compatible with standard polymer extrusion processes and its implementation is straightforward. Matttenex™ is usually introduced into the feedthroat of a fiber extruder and addition rate can be easily and conveniently adjusted for different product specifications.

Low addition rates
As a liquid formulation, Matttenex™ can be dosed with great accuracy and at very low addition rates ensuring uniform TiO₂ dispersion in processing and final products. Customers can choose from a range of ColorMatrix’s pumping systems for dosing or can utilize suitable in-house pumping systems.

Performance
Matttenex™ exhibits excellent flow characteristics and consistent batch-to-batch quality. Shelf life is more than six months under normal factory storage conditions. Independent industry testing of Matttenex™ shows excellent thermal stability during processing, a high degree of yarn physical property retention and compared with standard industrial delusterants, lower yarn abrasion and friction as well as improvements in filter pack life.

<table>
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<tr>
<th>Properties</th>
<th>Specifications</th>
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<tbody>
<tr>
<td>TiO₂</td>
<td>Anatase</td>
</tr>
<tr>
<td>Density</td>
<td>2.1 g/cm³</td>
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<tr>
<td>Viscosity</td>
<td>30,000 cP</td>
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<tr>
<td>Flash Point</td>
<td>&gt; 280°C</td>
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<tr>
<td>Boiling Point</td>
<td>&gt; 300°C</td>
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Technical support
As a global leader in liquid colors and additive technologies, ColorMatrix has extensive experience in liquid formulation, production systems and end use applications across a wide variety of polyester fiber markets. Our technical engineers work closely with our customers to advise on implementation of Matttenex™ for each customer’s specific product application and production environment. Our aim is to ensure that our customers achieve optimum value from our innovative technologies and have every opportunity to gain competitive advantage.
Important Notice

The information provided is given in good faith and is based on our knowledge at this time. ColorMatrix makes no warranties or representations, express or implied regarding the use of the above mentioned products. It is the responsibility of the finished article manufacturer to ensure that all relevant requirements are met.

ColorMatrix is a world leading innovator of liquid colorant and additive technologies for the plastics industry. Our advanced systems are designed to improve the processing, performance, aesthetics and sustainability of plastic products. ColorMatrix is part of the PolyOne Corporation.

For full contact details of ColorMatrix global locations please go to colormatrix.com