

Description

UVChem MB-R18 is a high-performance **UV stabilizer masterbatch**, designed for use in **raffia and woven fabric applications**. It contains a **synergistic blend of Hindered Amine Light Stabilizers (HALS) and UV absorbers** optimized for long-term resistance against photo-oxidation, loss of mechanical properties, and color fading. The product provides superior dispersion, thermal stability, and process consistency in tape extrusion and drawing processes. The masterbatch is fully compatible with PP matrix and formulated to minimize processing discoloration and to provide long-term UV protection when dosed at 1 wt.% in the yarn formulation.

Typical Applications

- Polypropylene raffia tapes and woven sacks
- Agricultural and industrial packaging fabrics
- PP monofilaments and ropes
- Outdoor storage and construction fabrics

Property	Test Method	Unit	Typical Value
Appearance	Visual	–	Off-white to light beige
Active Content	–	wt. %	20 ± 2
Melt Flow Index (230 °C / 2.16 kg)	ASTM D1238	g/10 min	7 – 9
Density	ASTM D792	g/cm ³	0.91
Volatile Matter (2 h @ 220 °C)	TGA	wt. %	< 1
Thermal Stability (5% weight loss)	TGA	° C	> 280
UV protection efficiency	ASTM D4329	–	> 90% retention of tensile strength after 500 h QUV

Advantage

- Excellent long-term UV resistance and color stability
- Maintains tensile and elongation properties during outdoor exposure
- Excellent compatibility with PP homopolymers (raffia grades)
- Low volatility and no interference with slip or antiblock additives
- Dust-free, free-flowing pellets for consistent feeding

Typical addition rate

Add **1.0 wt.% UVChem MB-R18** to the polypropylene base resin during extrusion or compounding to achieve optimum UV protection. For outdoor or high-radiation applications, the dosage can be increased up to **1.5–2.0 wt.%** depending on exposure conditions and product thickness. Ensure proper mixing using a **loss-in-weight gravimetric feeder** or equivalent dosing system for homogeneous distribution.

Packaging

UVChem MB-R18 is supplied in standard pellet form packed in 25 kg bags.

Storage and handling

UVChem MB-R18 should be stored to prevent direct sunlight and heat exposure. The storage area should also be dry and preferably not exceed 40°C; Bad storage conditions may lead to quality deterioration and product performance. It is advisable to pre-dry before use and process within 12 months under recommended conditions.

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