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MB-W70-PE • Rutile White Masterbatch

High Opacity & Dispersion for Blown Film & Injection Moulding

GRADE: FILM & MOULDING

1. PRODUCT DESCRIPTION & CHARACTERISTICS

AdCol MB-W70-PE is a premium polyethylene-based white masterbatch containing 70% high-purity, chloride-process rutile titanium dioxide (TiO_2) with advanced organic surface coating. Formulated on high-torque co-rotating twin-screw extrusion systems, it delivers superior tinting strength, brilliant whiteness, and exceptional resistance to surface lacing and die-lip buildup during high-speed blown film extrusion.

2. TYPICAL PHYSICAL & RHEOLOGICAL PROPERTIES

Property / Parameter	Test Method	Unit	Typical Value	Tolerance
Active Pigment Content (TiO_2)	ASTM D5630 / ISO 3451-1	%	**70.0**	± 2.0%
Titanium Dioxide Crystal Type	X-Ray Diffraction	—	**Rutile (Chloride Grade)**	—
Carrier Polymer System	FTIR Identification	—	**Polyethylene (LLDPE / LDPE)**	—
Specific Gravity (Density @ 23°C)	ASTM D792 / ISO 1183	g/cm³	**2.05**	± 0.05
Melt Flow Index (190°C / 2.16 kg)	ASTM D1238 / ISO 1133	g/10 min	**12.0**	± 3.0
Moisture Content / Volatiles	ASTM D6980 (Karl Fischer)	%	**≤ 0.12**	Max
Filter Pressure Value (FPV @ 14 µm)	EN 13900-5	bar/g	**< 0.8**	Max
Bulk Density	ASTM D1895	g/cm³	**1.15**	± 0.05
Thermal Heat Stability	DIN 53772	°C	**280**	5 min dwell
Light Fastness Rating	ISO 105-B02	Blue Wool	**Grade 7 – 8**	Superior
Pellet Geometry & Count	Visual / Balance	pellets/g	**38 – 45 (Cylindrical)**	Uniform

Recommended Processing & Let-Down (LDR)

- **General Packaging Films:** 1.5% to 3.5% (High whiteness & yield)
- **Liquid & Milk Packaging:** 4.0% to 7.0% (Complete optical opacity)
- **Injection Moulded Parts:** 1.0% to 2.5% (Caps, closures, crates)
- **Compatible Base Resins:** LDPE, LLDPE, HDPE, and PP copolymers.

Regulatory, Packaging & Storage

- **Food Contact:** Compliant with US FDA 21 CFR 177.1520 & EU 10/2011.
- **Environmental:** Fully compliant with RoHS (2011/65/EU) & REACH SVHC.
- **Packaging:** 25 kg multi-wall craft moisture-barrier bags on pallets.
- **Shelf Life:** 12 months under dry, ambient storage (<35°C).

Notice: Typical properties are reported for guidance only and do not constitute absolute warranty limits. Converters are advised to conduct internal extrusion trials to ensure performance suitability for specific die configurations and end uses.