

Technical Data Sheet **WCI HDPE F7000**

Product Description

WCI HDPE F7000 is a heavy-duty high-density polyethylene (HDPE) resin specifically developed for the production of very thin films where both strength and flexibility are required. With a density of 0.952 g/cm^3 and a very low melt flow rate of 0.04 g/10 min ($190^\circ\text{C}/2.16 \text{ kg}$), this grade is designed to provide an exceptional balance between mechanical strength and processability. The material exhibits high stiffness, superior tensile strength, and outstanding elongation at break, ensuring that films produced with **WCI HDPE F7000** can withstand mechanical stresses while maintaining flexibility. Its reliable environmental stress-crack resistance (ESCR) further enhances long-term durability in applications where exposure to physical stress and chemicals may occur.

Typical Applications

- **Packaging Films:** Production of tissue-like films, garment bags, counter bags, grocery sacks, and trash bags, where lightweight yet durable film is essential.
- **Industrial Uses:** Manufacturing of disposal waste bags, liners, and thin-gauge films that demand toughness and puncture resistance.
- **High-Speed Processing:** Tailored for high-speed blown film extrusion processes, delivering reliable optical performance, excellent surface finish, and balanced mechanical properties.
- **General Thin-Film Products:** Applications requiring a combination of durability, flexibility, and resistance to tearing or cracking.



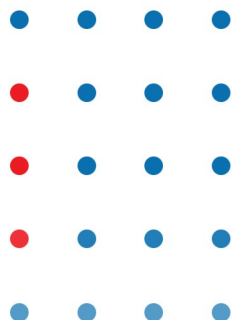
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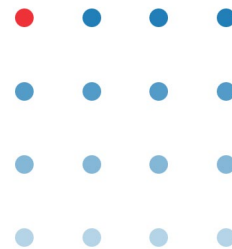


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Technical Specification

Property	Value	Units	Test Method
Melt Flow Rate (190°C/2.16kg)	0.04	g/10 min	ISO 1133
Density	952	kg/m ³	ISO 1183
Tensile Strength at Yield	27	MPa	ISO 527-1,-2
Tensile Strength at Break	>24	MPa	ISO 527-1,-2
Elongation at Break	>500	%	ISO 527-1,-2
Charpy Impact Strength	NB	kJ/m ²	ISO 179-1
Shore Hardness	64	D Scale	ISO 868
Stress Cracking Resistance	>600	hr	ASTM D1693
Melting Temperature	131	°C	ISO 11357
Vicat Softening Temperature	124	°C	ISO 306



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