

Aegis® H350ZI Nylon Extrusion Grade Homopolymer

Description

Aegis® H350ZI is an unfilled high-viscosity nylon 6 homopolymer grade for profile extrusion applications exhibiting excellent dimensional and structural properties. It exhibits good strength, stiffness, and toughness as well as excellent heat, chemical and abrasion resistance.

Typical property values for H350ZI include the following:

General Properties	Test Method	Units	Value
Parameter			
Viscosity, FAV	ASTM D-789		400
RV @ 96% Sulfuric Acid			5.3 ¹
Extractable Content	SOP-702-307	%	Max. 0.9
Specific Gravity, 23°C (73°F)	ASTM D-792		1.13
MeltFlowRate, 280°C(536°F), 2.16Kg	Internal SOP	g/10 min	2.6
Moisture Content	ASTM D-6869	%	Max. 0.12

Mechanical Properties	Test Method	Units	Value
Tensile Modulus, 23°C (73°F)	ISO 527-2	MPa (psi)	2,616 (379,468)
Tensile Strength, 23°C (73°F)	ISO 527-2	MPa (psi)	96 (13,926)
Elongation, @Yield, 23°C (73°F)	ISO 527-2	%	5.63
Elongation, @Break, 23°C (73°F)	ISO 527-2	%	46.3
Notched Izod impact, 23°C (73°F)	ASTM D-256	ft-lbf/in	1.294

Thermal Properties	Test Method	Units	Value
Melting Point	ASTM D-3418	°C (°F)	220°C (428°F)

Pellet / Polymer Properties	Test Method	Units	Value
Pellet Shape / Appearance	Visual	-----	Cylinder/White Opaque
Pellet Size	Internal SOP	g/100 pellets	0.834

¹ RV calculated from FAV

Processing Guidelines

Material Handling

This product is supplied in sealed containers and drying prior to processing is not required. However, higher moisture is the primary cause of processing problems. If drying becomes necessary, a dehumidifying or desiccant dryer operating at 80°C (176°F) is recommended. Drying time is dependent on moisture level. Further information concerning safe handling procedures can be obtained from the Safety Data Sheet. Alternatively, please contact your AdvanSix representative.

Extrusion Guidelines

Melt Viscosity vs. Temperature

Polymer Melt Temperature: 220°C (428°F)

Two main factors affect the melt viscosity (stiffness or fluidity of the melt):

1. The molecular weight (MW) of the resin: Higher MW resins will have a higher melt viscosity than lower MW resins.
2. Temperature of the melt for any given MW resin: Higher process temperatures will provide a more fluid melt viscosity than lower process temperatures.

Typical Profile

Extruder Barrel Temperature settings 240-290 °C (464-554 °F)

Note: The values in this data sheet are for natural color resins only. Colorants or other additives may alter some or all of these properties. The data listed here fall within the normal range of product properties, but should not be used to establish specification limits nor used alone as the basis of design.

The values presented in this data sheet are typical values and are not to be interpreted as product specifications.

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Contact AdvanSix

To learn more about the benefits of Aegis® Nylon Resins, visit [AdvanSix.com/Nylon Solutions](http://AdvanSix.com/Nylon_Solutions) or call: **1-844-890-8949** (toll free, U.S./Can.) **+1-973-526-1800** (international)

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