

Product Specification

October 2012

Product

Aegis® H35ZI

Product Description

Aegis® H35ZI is an unfilled, low viscosity, non-lubricated nylon 6 injection molding homopolymer exhibiting excellent melt flow properties for filling thin sections and reduced cycle times. It exhibits good strength, stiffness, and toughness as well as excellent heat, chemical and abrasion resistance.

Specification:

Parameter	Test Method	Units	Value
Viscosity, FAV	ASTM D-789		38 +/- 3
96% SAV			2.39
Moisture Content	ASTM D-6869	%	Max. 0.10
Extractable Content	SOP-702-307	%	Max. 0.8

General properties:

Physical	Test Method	Units	Value
Specific Gravity	ASTM D-792	sp gr 23/23 °C	1.12
Mold Shrinkage linear Flow	ASTM D-955	%	1.27
Rockwell Hardness, R Scale	ASTM D-785		119
Moisture (24 Hour)	ASTM D-570	%	1.6
Moisture (50% RH)	ASTM D-570	%	2.7
Moisture (Saturation)	ASTM D-570	%	9.5
Melt Flow Rate (235C, 1Kg)	ASTM D-1238	g/10 min	22.7
Mechanical	Test Method	Units	Value
Tensile Modulus, 23 °C (73 °F)	ASTM D-638	MPa	2,750
Tensile Strength, Yield, 23 °C (73 °F)	ASTM D-638	MPa	79
Elongation, Yield, 23 °C (73 °F)	ASTM D-638	%	4.1
Elongation, Break, 23 °C (73 °F)	ASTM D-638	%	75
Flexural Modulus, 23 °C (73 °F)	ASTM D-790	MPa	2,465
Flexural Strength, 23 °C (73 °F)	ASTM D-790	MPa	96
Impact	Test Method	Units	Value
Notched Izod impact -40 °C (-40 °F)	ASTM D-256	J/M	45
Notched Izod impact 23 °C (73 °F)	ASTM D-256	J/M	46
Thermal	Test Method	Units	Value
Melting Point	ASTM D-3418	°C	222
Heat Deflection @ 264 psi (1.8 MPa)	ASTM D-648	°C	47
Heat Deflection @ 66 psi (0.45 MPa)	ASTM D-648	°C	152
Coef. Of Linear Thermal Expansion	ASTM E-831	µm/mm °C	72

Product handling

This product is supplied in sealed containers and drying prior to processing is not required. However, high 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 Material Safety Data Sheet. Alternatively, please contact your AdvanSix Inc. representative.

Typical Profile

Melt Temperature 240-280 °C (464-536 °F)
Mold Temperature 80-95 °C (176-203 °F)
Injection and Packing Pressure 35-125 bar (500-1500 psi)

Mold Temperatures

A mold temperature of 80-95 °C (176-203 °F) is recommended, but temperatures as low as 10 C (50 F) can be used where applicable.

Pressures

Injection pressure controls the filling of the part and should not be applied for 90% of ram travel. Packing pressure affects the final part and can be used effectively in controlling sink marks and shrinkage. It should be applied and maintained until the gate area is completely frozen off.

Fill Rate

Fast fill rates are recommended to insure uniform melt delivery to the cavity and prevent premature freezing.

These values 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 for design.

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Contact AdvanSix

To learn more about the benefits of Aegis® Nylon Resins, visit Advan6.com or call: **1-844-890-8949** (toll free, U.S./Can.) **+1-973-455-3000** (international)

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