

	<b>Product Data Sheet</b>	Issue Date : 01.01.10
<b>Product Name</b>	<b>Futura HotPET - Type 105</b>	Old Type No. 990911

### Recommended Applications

- ▶ Hot fill beverage containers for fruit juices, sport drinks, sauces, iced tea.

### Product Features

- ▶ Futura HotPET is a PET based resin.
- ▶ Futura HotPET Resin and appropriate Preform/Bottle design and Heat Set Blow Molding technology offers the following unique advantages like, High dimensional stability, Excellent clarity, in-built UV protection up to 363 nm, excellent Flavor Retention with low Acetaldehyde generation, No neck crystallization is required. Hot fill bottles can withstand up to 88°C.
- ▶ Future HotPET is in full compliance with USFDA regulations and EU norms.

### Properties

Characteristic	Unit	Type 105	Test Method
		A	
Intrinsic Viscosity @ 30°C	dL/g	0.76 ± 0.02	FPL-QP-V-20-58
b* Color	CIE Lab	-2.0 ± 1.0	FPL-QP-S-20-55-Part-B-XXI
Carboxyl Number	meq/kg	25 max.	FPL-QP-T-20-55-Part-B-VIII
Melting Point	°C	252 ± 2	FPL-QP-DSC-20-55-Part-B-XVIII #
Acetaldehyde	ppm	1.0 max.	FPL-QP-GC-20-55-Part-B-XII
Bulk Density	g/cc	0.85 ± 0.10	FPL-QP-P-20-55-Part-B-XX
Weight of 20 Chips	mg	300 ± 50	FPL-QP-W-20-55-Part-A-I
Moisture (when packed)	wt. %	0.25 max.	FPL-QP-E-20-55-Part-B-VI

# Determined using DSC second heating cycle.

### Processing Parameters

#### **a) Drying Condition**

Granules must be thoroughly dried before processing to limit the occurrence of hydrolytic degradation.

Drying temperature	165 ± 5 °C
Drying time	4- 5 hours
Dew point	- 40 °C
Residual moisture content	≤ 25 ppm

#### **b) Process Temperature\*\* (Injection Stretch Blow Molding)**

Barrel Temperature	290 ± 5 °C
Mold Temperature	290 ± 5 °C
Preform Temperature	110 ± 5 °C

Depending upon the end use, the heat set temperature of the mold can be varied between 90 and 130 °C.

“Blow and fill” is recommended for best performance during hot fill on filling lines.

\*\* The values quoted above are typical numbers for benchmarking. Individual machine parameters should be determined on a case-by-case depending on the design of the product(s).

### Packing

Resin can be supplied in 1000 kg PP jumbo bags with LDPE liner at 20 bags per 20 ft FCL container as required.

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