

	Product Data Sheet	Issue Date : 01.01.10
Product Name	Futura PENT - Type 411	Old Type No. 700190

Recommended Application

- ▶ Feeding Bottle.

Product Features

- ▶ Futura PENT is a PEN based resin containing terephthalates.
- ▶ Futura PENT provides in-built UV barrier up to 375 nm, high clarity, and good dimensional stability.
- ▶ Futura PENT container withstands sterilisation at 100°C.
- ▶ Futura PENT is recyclable.

Properties

Characteristic	Unit	Type 411	Test Method
		D9	
Intrinsic Viscosity @ 30°C	dL/g	0.70 ± 0.02	FPL-QP-V-20-58
b* Color	CIE Lab	-3 ± 2	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	253 ± 3	FPL-QP-CAP-20-55-Part-B-XVII #
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 capillary melting point method on feed resin.

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	295 ± 5 °C
Mold Temperature	295 ± 5 °C
Preform Temperature	125 ± 5 °C

** 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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