

	Product Data Sheet	Issue Date : 01.10.10
Product Name	Futura GreenPET - Type 104	Old Type No. 940403

Recommended Applications

- ▶ Carbonated Soft Drink (CSD) Bottles.
- ▶ Sheets for Thermo forming / Vacuum forming for APET applications.

Product Features

- ▶ Futura GreenPET is a PET based resin manufactured by chemical glycolysis with various PCR PET levels.
- ▶ Futura GreenPET resin is formulated with combination of special thermal stabilizer and additives that provides a good balance of clarity, rigidity and dimensional stability to the bottle.
- ▶ Futura GreenPET can be formulated with Clear fast reheat additive for achieving energy saving in high speed blowing operations.
- ▶ Futura GreenPET is in full compliance with USFDA regulations and new EU norms.
- ▶ 100%PCR Type-104 D is a master batch, consumed by customer to alter the PCR proportion in their polyesters.
- ▶ Recyclable under SPI code no.1.

Properties

Characteristic	Unit	Type 104				Test Method
		A	B	C	D	
		20-30%	31-40%	41-70%	100%	
Intrinsic Viscosity @ 30°C	dL/g	0.82 ± 0.02	0.82 ± 0.02	0.82 ± 0.02	0.82 ± 0.02	FPL-QP-V-20-58
b* Color	CIE Lab	1 max.	2 max.	3 max.	4 max.	FPL-QP-S-20-55-Part-B-XXI
Carboxyl Number	meq/kg	25 max.	25 max.	25 max.	25 max.	FPL-QP-T-20-55-Part-B-VIII
Melting Point	°C	246 ± 2	246 ± 2	245 ± 3	244 ± 3	FPL-QP-DSC-20-55-Part-B-XVIII #
Acetaldehyde	ppm	1.0 max.	1.0 max.	1.0 max.	1.0 max.	FPL-QP-GC-20-55-Part-B-XII
Bulk Density	g/cc	0.85 ± 0.10	0.85 ± 0.10	0.85 ± 0.10	0.85 ± 0.10	FPL-QP-P-20-55-Part-B-XX
Weight of 20 Chips	mg	300 ± 50	300 ± 50	300 ± 50	300 ± 50	FPL-QP-W-20-55-Part-A-I
Moisture (when packed)	wt. %	0.25 max.	0.25 max.	0.25 max.	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	285 ± 5 °C
Mold Temperature	285 ± 5 °C
Preform Temperature	110 ± 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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