

	Product Data Sheet	Issue Date : 01.10.10
Product Name	Futura WorldPET – Type 413	Old Type No. Nil

Recommended Application

- ▶ Strapping application.
- ▶ Toy manufacturing.
- ▶ Injection Molding components.
- ▶ Textile application.

Product Features

- ▶ Futura WorldPET is a PET based copolyester resin manufactured using 100% PCRPET by Mechanical Recycling.
- ▶ 100%PCR Type 413 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 413				TEST METHOD
		D7	D9	D11	D13	
Intrinsic Viscosity @ 30°C	dL/g	0.62 ± 0.02	0.72 ± 0.02	0.82 ± 0.02	0.92 ± 0.02	FPL-QP-V-20-58
b* Color	CIE Lab	3 max.	4 max.	5 max.	6 max.	FPL-QP-S-20-55-Part-B-XXI
Carboxyl Number	meq/kg	35 max.	35 max.	35 max.	35 max.	FPL-QP-T-20-55-Part-B-VIII
Melting Point	°C	246± 3	246± 3	246± 3	246± 3	FPL-QP-DSC-20-55-Part-B-XVIII #
Bulk Density	g/cc	0.80 ± 0.10	0.80 ± 0.10	0.80 ± 0.10	0.80 ± 0.10	FPL-QP-P-20-55-Part-B-XX
Weight of 20 Chips	mg	450 ± 50	450 ± 50	450 ± 50	450 ± 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 Molding & Stretch Blow Molding)

Barrel Temperature	285 ± 5 °C
Mold Temperature	285 ± 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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