



Extrupet (Pty) Ltd

100, Dekema Road, Wadeville, Johannesburg, South Africa.



Product Specifications for Food grade rPET (PhoenixPET) – SHEET GRADE

Technology Details:

Extrupet (Pty) Ltd. has installed a 'Super Clean' recycling process for post-consumer P.E.T. bottles based on Erema's 'Vacurema' Technology. The US Food and Drug Administration (FDA) has approved the 'Vacurema' process in 2000 such that output material of this 'Super Clean' process can be re-used for the manufacture of food safe PET sheet & PET bottles for direct food contact applications

Specifications :

S.No	Quality Parameter	Unit	Specifications	Test method
1	Intrinsic Viscosity ^{*1}	dl/gm	0.73 ± 0.02	PFB2B 3.1
2	Colour L ^{*2}	CIE	69 ± 4	PFB2B 3.2
3	Colour b ^{*2}	CIE	0.0 to -7.0	PFB2B 3.2
4	Chips / gram	no/gm	55 ± 5	PFB2B 3.4
5	Bulk density	Kg/lit	0.85 ± 0.03	PFB2B 3.5
6	Acetaldehyde ^{*3}	ppm	Max 4.5	PFB2B 3.3
7	Moisture	%	Max 0.20	PFB2B 3.6

Note:

*1 – IV tested by LMI DYNISCO 4004 (ASTM D1238)

*2 - using Minolta CR 410 Chroma Meter

*3 – using Perkin Elmer GC with head space analyzer

Processing Parameters:

- a) Drying Condition: PhoenixPET granules must be thoroughly dried before processing to limit the occurrence of hydrolytic degradation.
- Drying temperature - 165 ± 5 °C
 - Drying time - min 4 hours
 - Residual moisture content - < 50 ppm
- b) Process Temperature*:
- Machine heating - 280 ± 5 °C
 - Mold heating - 280 ± 5 °C

* - the values quoted above are typical numbers for benchmarking; individual machine parameters should be determined on a case to case basis depending on the design of the product and final product requirements.

Packaging & Labelling:

PhoenixPET resin, in crystallized form, is packed in 1m*1m*1.3m brand new Polypropylene bulk bags with a virgin LDPE liner (avg 1100 ± 50 kgs) and bags are firmly tied on top with lock tie / PP strings and bottom with PP strings. Also the packaging quantity can be adjusted as per customer requirement. Product can be discharged from the top as well as the bottom of the bag. Each bag is identified with a label giving information of batch no, bag no, weight, date/time of packing and operator packed.

Storage and Distribution:

Bags are to be stored in a covered place at ambient temperature. Prolonged storage of PhoenixPET resin bags in sunlight will degrade the packaging material and not the product. Transportation is done by trucks/containers after due hygiene checking.

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