RECYCLING OF WASTE PET BOTTLES INTO VALUE ADDED PRODUCTS

WASTE PET BOTTLES

CLEAN PET FLAKES

CLEAR SHEET FOR THERMOFORMED PACKAGING

BLENDING WITH VIRGIN PET

RECYCLED PET GRANUELS

NON FOOD CONTAINERS

STRAPPING TAPE

ENGG. PLASTICS

KPS Consultants & Impex Pvt. Ltd., New Delhi, India
Production of recycled PET granules involves two steps

1. Conversion of waste PET bottles into clean flakes by grinding, hot washing, removal of contaminants (caps, labels, glue, organic waste etc.)
2. Conversion of flakes into recycled PET granules (pellets) by means of a special extrusion process with vacuum degassing to remove moisture & volatile contaminants and physical screen filtration to remove any solid contaminants. Extruded material is pelletized by means of strand pelletizer.

Recycled PET granules produced have no discoloration, have low level of contaminants and with minimal drop in Intrinsic Viscosity which is a measure of the length of polymer chains and hence polymer physical – chemical properties.

**Applications:** Recycled PET or R-PET from waste PET bottles is used for the producing various value-added finished and semi-finished products.

1) Recycled PET is used to produce **Clear Sheet** used for manufacturing thermoformed packaging material used in packaging of health care and cosmetic products, ready meal and snacks, dairy and bakery products, confectionary, consumer electronic items, fruits etc. The sheet industry has the ability to extrude multi-layer sheet and this enables them to sandwich an R-PET layer between two outer layers of virgin PET particularly for food contact applications.
2) Recycled PET is used for the manufacture of Containers / Bottles for non-food contact applications such as Liquid Detergent, Hand wash, Cleaning Solution, Shampoo, Phenyl, Battery water etc.

3) Recycled PET is used for the manufacture of Strapping Tape that keep boxes firmly held on their transport pallets, used for bailing of raw cotton etc.
4) Recycled PET is used for Blending with Virgin PET for various end applications like production of Polyester Oriented Yarn (POY), Polyester Filament Yarn (PFY), Polyester Staple Fiber (PSF) and Bottles & Containers. Polycarbonate is blended with Recycled PET (in place of virgin ABS) to reduce compound cost.

We are a leading Technical & Project Consulting organization in the polymer field. We can provide Technology / Know-how and related technical services for the manufacture of Recycled PET granules and different value added products from waste PET Bottles. We provide Project Consultancy Services for the project implementation such as Selection & Sourcing of equipment, Plant layout and factory building architectural drawing, Installation & Commissioning, Compounding & Processing, Quality Control & Testing and advisory services for trial running of plant along with foreign equipment suppliers, marketing advice etc. In short we can assist you to plan and implement project from scratch.

Look forward to hearing from you.

Regards,

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