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BAMBERGER POLYMERS TECH TIPS

Recycling

Defining Recycling

Recycling is the process of recovering material from waste and turning it into new products. The original product is destroyed in this process, usually through a melting process, but it used to form new products typically. The recycled material is added to virgin materials at an OEM defined level of acceptance or let down ratio (typically 5%).

In 1988, The Society of the Plastics Industry (SPI), now known as the Plastics Industry Associates, created the Resin Identification Code (RIC) system. This system was developed to provide a consistent national program to help sorting line workers identify post-consumer packaging types using the six basic packaging resin classes.

Recycling codes

1. PET/PETE. Examples: Clear. Water and drink bottles, food jars, hinged food containers, cosmetics. Curbside Recycle

2. HDPE. Examples: AG pipe, Natural gas pipe, detergent, antifreeze, milk, juice bottles, pails, containers. Curbside Recycle

3. PVC. Examples: Siding, flooring, hose, tubing, plumbing, window frames, wire insulation. Not curbside recycle.

4. LDPE. Examples: Bread, dry cleaning, garbage bags, food wraps, storage bins, lab equipment, squeeze bottles. Curbside recycle.

5. PP. Examples: Auto, commercial, industrial parts, caps, containers, tapes, microwave cookware, hinged containers. Curbside Recycle.

6. PS. Examples: Trays, disposable drink cups and plates, food containers, toys, cutlery,

7. OTHER. PC/Acrylic/Nylons. Auto parts, riot face shields, impact windows, helmets, water cooler bottles, safety glasses. Not curbside Recycle.



Common Recycling Definitions

INDUSTRIAL RECYCLING -Reprocessing of materials from finished products. Post processing. Post Industrial content of compound.

MATERIAL RECOVERY FACILITY - Sorting facility removes and cleans contamination for further processing.

MELT FILTRATION - Extrusion with fine screens and filter to remove all non-meltable contaminants. Wood, metal, paper.

MIXED WASTE FACILITY - Facility that accepts both municipal solid waste and mixed recyclable materials. **NATURAL RECYCLING** - When organic materials decompose in nature.

NON BIODEGRADABLE - Will not decompose in any composting process.

NON-RECYCLABLES - Items not accepted in recycling for plastics. Food waste, metals, ceramics, others.

PLASTICS RECYCLING FACILITY - Facility that accepts mixed plastic items only. Remove contamination and separate polymers to be sold for reprocessing.

POST CONSUMER - Plastic Items after they have been used in their intended application.

POST INDUSTRIAL - Plastics material generated in a manufacturing process. Not end use as above.

RECLAIMER - Organization that converts post-consumer and industrial plastics into a raw material for use. **RECOVERY** - Taking recyclable materials out of a landfill and put into a recycling system.

SECONDARY MRF - Takes low volume and value materials from MRF's. further separation needed.

UPCYCLING - Taking a product and using it for something other than its intended use.

WASHED FLAKE - The flake that is washed and to remove contamination either hot or cold systems.

ADHESIVE RESIDUAL - What remains after washing. Adhesives used on containers and film.

BALLISTIC SEPARATOR - Machine that separates materials by physical characteristics. Size, weight, etc. **ELUTRIATION** - System that uses gravity/air separation. Lifting of flake to remove fines and contaminant. **OPTICAL SORTING** - Using lasers and camera sorting and ID of materials. Increase output.

***BIODEGRADABLE PLASTIC** - Materials that will degrade in a natural specialized environments. In a commercially controlled composting facility. Will not degrade in a standard landfill. **CANNOT** be mixed into other plastics recycling streams as it is then a contaminant.

BIOPLASTICS - Plastics made from all or partial plant-based materials.