





- **ADHESIVE RESIDUAL:** Adhesive that remains adhered to the original plastic container or film surface and is not removed by the washing process.
- **ATTACHMENTS:** Components bonded to plastic packages, such as handles or spouts, after the base item is molded and not during the molding process itself.



- **BALE:** A compressed bundle of recyclable material bound by wire or banding.
- **BALER:** Equipment used to densify and contain recyclable material, forming wire-tied bundles of recyclable materials specifically sized for easy handling, storage, and transport.
- **BALLISTIC SEPARATOR:** A mechanical device used to separate materials by exploiting their different characteristics such as size, shape, and weight.

- **BIODEGRADABLE PLASTICS:** Plastics that will degrade rapidly by naturally occurring organisms in natural or specialized environments to carbon dioxide or methane / natural gas. The degradation may be due to additives added to the plastic material or due to the material itself. Biodegradable plastics cannot be mixed into normal recycling streams as they act like contaminants.
- **BIOPLASTICS:** Plastics that are either fully or partially created from plants that have properties identical to the polymers created from petroleum-based feedstocks.



- **CLUMPING:** An effect that occurs when amorphous or low melting point polymers are mixed with crystallized polymers such as PET. The amorphous or low melting polymers become soft and sticky at elevated PET drying temperatures and act as an adhesive creating clumps of PET flake.
- **COLOR VALUES:** Measurements of color for plastics that are typically measured by a spectrophotometer using the $L^*a^*b^*$ system where: L^* is a measure of lightness and darkness; b^* is a measure of blueness or yellowness; and a^* is a measure of redness or green.

- **COMINGLED CONTAINERS:** Containers made from different materials such as aluminum, steel, plastic, and glass that are mixed in one recycling bin.
- **COMPACTOR:** A container for solid waste storage that uses hydraulic pressure to maximize container weight.
- **CURBSIDE RECYCLING:** A collection method used by homeowners where they place their recyclables in rolling carts or “blue boxes” and place them curbside for collection.



- **DE-LABELING:** The process steps used to remove a label from a package or container.
- **DE-SEAMING:** The process step that removes shrink sleeve labels with adhesive seams from plastic bottles by dissolving the adhesive in hot caustic wash water, thus allowing the label to be separated from the container.
- **DESICCANT DRYER:** A technology that uses a desiccant bed to remove moisture from the air in the dryer used to dry plastics prior to molding.
- **DIRTY FLAKE:** Plastic item or package that has been granulated, but not washed. The flake will include the residual contents in the packaging, labels and closures on the packaging, and any dirt or organic contamination from collection and sorting of the packaging.
- **DROP-OFF:** A type of collection where residents must deliver their recyclables to a central drop-off collection facility.
- **DUAL STREAM:** A type of recycling where cans, bottles, and containers are collected separately from paper products.



- **ELUTRIATION:** The process of circulating plastic flakes through an air separation where flake is passed down with gravity through a process unit that has an up-draft of air. The up draft is used to remove light pieces of contamination such as fines, label residue, and multi-layer residue.
- **EMISSIONS:** The release or discharge of a substance into the environment.
- **ENERGY RECOVERY:** The creation of energy through burning or chemically processing solid waste materials.

- **EPA:** The acronym for the U.S. Environmental Protection Agency. It is the federal agency of the U.S. government that sets environmental protection and enforcement standards. The EPA was created in 1970 and serves the entire country and US territories through its 10 regional offices.



- **FLAKE (OR BOTTLE FLAKE):** The resulting small, flat shaped pieces of material created when plastic bottles are granulated.
- **FLEXIBLE PACKAGING:** Plastic bags and film as well as stand up pouches. Non-rigid packaging.
- **FREE ADHESIVE:** Adhesive that separates from the plastic surface as well as the label and becomes dispersed in the wash water. Typically, acrylic, and hot melt adhesives are dispersed as a second non-aqueous phase in wash water. Some wet glue adhesives might be soluble in wash water.



- **GRANULATION:** The reduction in size of plastic parts for further processing including washing, extrusion, and molding. Typically, rotating cutting knives are used to cut the plastic to a size that falls through a sized screen resulting in pieces in the range of 6 to 12 mm. These pieces are referred to as granulate, regrind, or flake. Also referred to as “grinding”.



- **HDPE NATURAL BOTTLES BALES:** Any whole, blow-molded, high density polyethylene bottle containing the ASTM D7611 “#2, HDPE” resin identification code that is unpigmented, and was generated from a curbside, drop-off, or other public or private recycling collection program. Bottles are defined as containers that have a neck or mouth that is smaller than the base.
- **HDPE - COLORED BOTTLES BALES:** Any whole, blow-molded, high density polyethylene bottle containing the ASTM D7611 “#2, HDPE” resin identification code that is pigmented and opaque, and was generated from a curbside, drop-off, or other public or private recycling collection program. Bottles are defined as containers that have a neck or mouth that is smaller than the base.

- **HDPE INJECTION - BULKY RIGID PLASTICS:** Any injection grade #2 HDPE, typically found to be wide mouthed containers and/or oversized. Examples include items such as carts, crates, buckets, baskets, lawn furniture, etc. Also referred to as MRP (Mixed Rigid Plastics).



- **INDUSTRIAL RECYCLING:** Processing of scrap materials generated from manufacturing products and packaging. Post processing, these materials are used it to make new compounds which are classified as Post-Industrial content.
- **IN-MOLD LABELS:** Labels for plastic packages or items that are applied during the molding process, as opposed to being applied to a finished item. The label is printed on a plastic film and positioned in the mold and the container is molded over the label. The hot melted plastic of the container adheres firmly to the label film.

- **INTRINSIC VISCOSITY (IV):** A common measure related to the molecular weight of PET resin. A sample of resin is dissolved in a solvent, and the viscosity of the solution is a measure of molecular weight



- **JUNK MAIL:** Unsolicited mail that consists mostly of advertising, promotional materials, catalogs, and requests for donations. Most curbside recycling programs accept junk mail.



- **KOSHER ADDITIVES:** Additives utilized to enhance processibility of plastics that are used in food contact that adhere to Jewish and Halal dietary laws.



- **LANDFILL:** A specially engineered site for disposal of solid waste.
- **LIBERATE:** To remove an attached package component through machine processing. For example, a package may employ a tamper evident band secured to the finish of a bottle. The granulation process “liberates” the tamper evident band from the container finish.



- **MATERIAL RECOVERY FACILITY (MRF):** A facility that utilizes manual, robotic, and machine processes to sort recyclable materials, clean and remove contamination, and process for shipment for further processing.
- **MELT FILTRATION:** The process to remove contaminants during extrusion utilizing a fine screen or continuous band to filter the melt. Melt filtration is widely used to remove metals, wood and paper, thermoset materials, and other un-melted physical contamination from recycled plastics.

- **METALLIZED FILM:** Film that contains a metal layer, often aluminum, that is deposited by a physical vapor deposition process.
- **MIXED WASTE FACILITY:** A materials recovery facility that accepts municipal solid waste and recyclable materials mixed together. The recyclables are separated and sorted and shipped to various markets.
- **MULTI-LAYER CONTAINERS OR FILM:** Packages constructed with multiple layers of polymer laminated by heat or adhesive. Multi-layer packaging may consist of the same polymer or incorporate different polymers to achieve desired properties.
- **MUNICIPAL SOLID WASTE:** Residential and commercial non-hazardous waste commonly referred to as MSW.



- **NATURAL RECYCLING:** A process by which organic material decomposes in nature, such as leaves decomposing in a forest.
- **NON-BIODEGRADABLE:** Does not degrade or break down in residential or industrial composting processes.
- **NON-RECYCLABLES:** Those items that are not accepted into the recycling stream for collection. For example, food waste, garbage, food-tainted containers, and ceramics.



- **OPTICAL SORTING:** The automated process of identification of recyclables using cameras or lasers to enhance sorting. Optical sorting can improve quality, increase throughput, and reduce labor costs.
- **ORGANIC WASTE:** Waste material containing carbon. The organic fraction of municipal solid waste includes paper, wood, food wastes, plastics, and yard wastes.



- **PELLETS:** A form of plastic created when washed flake is extruded into a strand and chopped into uniformly sized pieces. Pellets have a higher bulk density than flake with more consistent, accurate feeding and conveying performance.
- **PET BOTTLE BALES:** Any whole polyethylene terephthalate (PET) bottle with a screw-neck top that contains the ASTM D7611 “#1, PET or PETE” resin identification code. PET bottles are typically clear or transparent green in color.
- **PET THERMOFORM BALES:** Any whole polyethylene terephthalate (PET) package labeled with the ASTM D7611 “#1, PET or PETE” resin identification code. Thermoformed bales do not include bottles and jars but are typically comprised of items such as egg cartons, baskets, clamshell containers, cups, lids, cake domes, covers, tubs, deli containers, trays, and similar items.

- **PLASTIC RECYCLING FACILITY (PRF):** An industrial facility that accepts only mixed plastic items and conducts separation and contamination removal to create separate plastic types that can then be sold for reprocessing.
- **PLASTIC SCRAP:** Plastic material that did not meet quality specifications for fully acceptable products or trim or excess from the manufacturing process. Scrap may be in pellet form, converted parts or trim.
- **POST-CONSUMER:** The status of an item after it has been used for its intended purpose. Post-consumer plastic material may be generated by households or commercial/retail establishments.
- **POST-INDUSTRIAL:** Material that was generated in the manufacturing process or has not been used for its intended purpose.
- **PP SMALL RIGID PLASTICS:** Any whole bottle, container, or product, with a #5 PP resin code such as bottles, containers, prescription bottles, yogurt cups, margarine tubs, ice cream tubs, cold drink cups, microwavable trays, tofu tubs, hangers, caps, and similar items.
- **PP ALL RIGID PLASTICS - VARIATION OF PP ALL RIGID PLASTICS:** Bulky PP plastics are items that are greater than 5 gallons in size, such as buckets, crates, waste baskets, toys, and storage bins.
- **PRESSURE SENSITIVE PAPER LABELS:** Paper labels with an adhesive backing that are pressed onto the surface of a package.



- **QA PROCESS:** Quality assurance checklist to ensure recycled materials meet property specifications.



- **RECLAIMER:** A commercial organization that accepts post-consumer and/or post-industrial plastics and performs a series of operations to convert materials into a useful raw material.
- **RECOVERY:** The successful diversion of recyclable materials out of landfill disposal and into recycling systems.
- **RECYCLABLES:** Those materials that are identified for collection, processing, and recovery/reuse.
- **RECYCLING:** Mechanical or chemically separating, collecting, processing, marketing, and using a material that would otherwise be landfilled or incinerated.

- **REPROCESS:** To convert recovered materials into new raw materials that can be used to make new finished goods.
- **RESIN IDENTIFICATION CODE (RIC):** A numerical coding system in which symbols or numbers are used to solely identify the plastic material from which a part is made.



#1 is PET



#5 is PP



#2 is HDPE



#6 is PS



#3 is PVC



#7 is other / mixed plastics



#4 is LDPE

- **ROLLING CARTS:** Wheeled containers used to collect and store recyclables. Typically, the cart is placed at the curb for collection.
- **ROLL-ON SHRINK-ON (ROSO) LABELS:** Labels that are wrapped around a container where the leading film edge is adhesively attached to the container and the trailing edge is adhesively attached to the leading film edge.



- **SECONDARY MATERIAL RECOVERY FACILITY:** An industrial facility that accepts low volume or low value materials from MRFs and conducts further separation to transform these materials into marketable products.
- **SEPARATE:** Mechanical or chemical processes utilizing physical properties like density, to separate them. For example, an HDPE tamper evident band on a PET bottle will float in the separation process, while the PET bottle will sink.
- **SHRINK SLEEVE LABELS:** Labels placed around a package, usually as a preformed tube shape, that shrink to conform to the package when heated.

- **SINGLE STREAM:** The system where all recyclable materials are combined with no sorting by the generator. Sorting of single stream material is performed at a material recovery facility (see MRF).
- **SOLID STATING:** Heating PET pellets under a vacuum or inert atmosphere that contains no moisture. Solid stating promotes removal of water and builds the molecular weight of the PET.
- **STAR SCREEN:** A mechanical device used to convey and separate materials. Star-shaped discs mounted on rotating shafts allow lighter, larger 2-dimensional items to flow forward while forcing smaller, heavier, and 3-dimensional items to drop through.



- **TRANSFER STATION:** A facility that receives and consolidates solid waste and loads the waste onto trucks or railcars or barges for long haul to distant disposal facilities.
- **TROMMEL SECTION:** A mechanical screening machine used to separate materials. It consists of a perforated cylindrical drum that is elevated at an angle at the feed end.



- **UBC:** An acronym for used beverage container, usually plastic soda bottles and aluminum cans.
- **UPCYCLING:** Utilizing materials again, but in a manner different than what it was originally intended. The original product is left mostly intact, utilizing its shape, form, and material for a different purpose. Examples include using car tires as swings or playground elements, using corks to make a cork board, or using shipping pallets to make furniture or interior design elements.



- **VARIABLE CONTAINER RATE:** A charge for solid waste services based on the volume of waste generated measured by the number of containers set out for collection.
- **VIRGIN MATERIALS:** Any basic material for industrial processes that has not been previously converted.
- **VOLUNTARY PRODUCER RESPONSIBILITY (VPR):** A range of voluntary approaches commonly financed by industry, to increase the recovery of post-consumer materials. This could include public-private partnerships, coalition building and cross competitor industry collaboration.



- **WASH WATER:** The water-based solution used to wash plastic flake. Plastics are washed under different conditions depending upon the plastic and the end use requirements.
- **WASHED FLAKE:** Flake that is obtained after dirty flake is washed to remove surface contamination through either hot water or cold-water systems.
- **WASTE DIVERSION:** Preventing waste material from being disposed of in incinerators or landfills and instead directing it into the recycling stream.

- **WASTE STREAM:** The flow of material from the generator to disposal.
- **WASTE TO ENERGY FACILITY:** A facility where recovered waste is converted into a useable form of energy, usually by a combustion process.
- **WET GLUE-ON LABELS:** Labels using an adhesive layer that is moistened, and then the label and adhesive are adhered to the package.
- **WRAP AROUND LABELS:** Labels that are wrapped around a container and fixed in place with an adhesive on the ends, but not fixed with heat like ROSO labels. Wrap around labels are typically polypropylene film or paper.



- **YARD WASTE:** Leaves, grass, trees, and vegetation suitable for composting.



- **ZERO WASTE:** The reduction of generation of solid waste to zero, or close to zero.