

# Guidelines for Plastic Scrap: P-2018

## Baled Recycled Plastic Scrap Commercial Guidelines

### General Information

Commercial Guidelines for Baled Recycled Plastic Scrap were developed to provide industry-wide quality standards. These standards will facilitate commodity trading of these materials. They will also focus suppliers of such material on the quality requirements of their customers.

### Product

These guidelines are designed with the potential for dealing with all recycled plastic in bale form. Initial specifications refer only to bottles. The code framework allows for generation of guidelines for all types of plastic packaging materials (including rigids and flexibles) with room for expansion to other plastic products and resins including those which are used to produce durable goods. Guidelines for those products may be added at a later date.

### Bale Density

Bales shall be compressed to a minimum density of 10 pounds per cubic foot and a maximum density to be determined by individual contract between Buyer and Seller. Increased density may improve transportation efficiency, but over-compression may adversely affect the ability of a Buyer to separate, sort, and reprocess the material.

### Bale Tying Material

Bale wires, ties, or straps shall be made of non-rusting or corroding material.

### Bale Integrity

Bale integrity must be maintained through loading, shipping, handling, and storage. Distorted or broken bales are difficult to handle. They are unacceptable and may result in downgrading, rejection, or charge back.

### Allowable Contamination

Unspecified materials must not exceed 2% of total bale weight. Bales which contain over 2% will be subjected to reduction in the contracted price of the material as well as charges for disposal of the contaminants. The reduced percentage will vary depending upon the amount and type of contamination. Quality of the baled plastic is the primary factor which determines the value.

### Prohibited Material

Certain materials are understood to be specified as "prohibited." Such materials will render the bale "non-specification" and may cause some customers to reject the entire shipment. These may include plastic materials which have a deleterious effect on each other when reprocessed, and materials such as agricultural chemicals, hazardous materials, flammable liquids and/or their containers, and medical waste.

### Liquids

Plastic containers/materials should be empty and dry when baled. The bale should be free of any free flowing liquid of any type.

### General

Shipments should be essentially free of dirt, mud, stones, grease, glass, and paper. The plastic must not have been damaged by ultraviolet exposure. Every effort should be made to store the material above ground and under cover. A good faith effort on the part of the supplier will be made to include only rinsed bottles which have closures removed.

## Definitions for Plastic Materials

### Baled

Loose material that is compressed and bound together.

### Densified

Material that is compressed through mechanical means. Typically applies to foam (purged) and film (turned into "popcorn"). Densified material is typically sent on for additional processing.

### Durable Goods

Electrical and electronic equipment, appliances, automobiles (called "transportation equipment" in ISO 15270), construction products (included in ISO 15270) and industrial equipment (included in ISO 15270)

### Flake

A generic term that refers to size and shape. Typically consists of plastic bottles or plastic film typically ground into a chip.

### Installed

Material that has been purchased by a consumer and used for its original purpose. Such material may be scrap from the installation process. The material may have reached the end of its serviceable life and has been removed from service. In distribution center or worksite environments, the packaging has been opened and exposed to environmental conditions causing a higher likelihood of contamination. This material can also be categorized as "post-consumer."

### Mixed Load Plastic

Shredded plastic that contains various types of resins and requires mechanical sorting to reach final specification. Typically baled and not granulated. Types and grades included in the bale to be agreed to by buyer and seller.

### Plastic Bottle

A rigid container which is designed with a neck that is smaller than the body. Normally used to hold liquids and emptied by pouring.

### Plastic Film

A thin flexible sheet which does not hold a particular shape when unsupported.

### Postconsumer

Products generated by a business or consumer that have served their intended end use and have been separated or diverted from the solid waste stream for the purpose of recycling.

**Purge**

Plastic that has been melted and has hardened. This material has no set shape or form.

**Recovered Plastic**

Plastic materials which have been recovered or diverted from the solid waste stream. Does not include materials generated from and commonly reused within an original manufacturing process.

**Recycled Plastic**

Plastics composed of either post-consumer or recovered material or both.

**Regrind**

A generic term that refers to hard rigid plastic typically ground into a chip. Typically consists of material that is the same grade, color and type. It can be used in extrusion or molding processes.

**Rigid Plastic Container**

A package (formed or molded container) which maintains its shape when empty and unsupported.

**Shred**

Size reduced material. The typical upper size can be between 3" to 12", although in some cases the upper size can be as small as about 1". Size range, characteristics should be agreed to between buyer and seller.

**Shredded Plastic**

Generic term. Material that contains a high plastic content. Typically contains 90% plastic content.

**Shredder Residue**

The remaining mixture after the majority of metals have been recovered from durable goods "shred." The mixture can contain plastics, rubber, wood, glass, rocks, dirt, paper, film, textiles, wires and other metals missed during the metal recovery process. The predominant single material is often plastic, which can vary from about 15% to about 90% depending on the type of durable goods and the steps taken in the metal separation process. Size range, characteristics should be agreed to between buyer and seller.

**Uninstalled**

Can be found in multiple environments such as worksite, distribution centers or OEM facilities. The material has not been used due to a defect or other circumstance. It can be obsolete or surplus material. Material is that recovered from the distribution chain can also be categorized as "post-consumer." Material recovered before the distribution chain can be categorized as "pre-consumer."

**Common issues for this category:**

The following list applies to all materials listed in this category.

- Caps, enclosures, and labels are acceptable.
- Product need not be washed, but preferred.

**PET Bottles**

**Description:** Any whole Polyethylene Terephthalate (PET, #1) bottle with a screw-neck top that contains the ASTM D7611 "#1, PET or PETE" resin identification code and that is clear, transparent green, or transparent light blue. All bottles should be free of contents or free flowing liquids and rinsed.

**Product:** PET Bottles

**Source:** Post-Consumer Material

**Contamination:** Please check with your pet buyer(s) as to their allowances for:

- Other Colored PET Containers
- PET Thermoforms, e.g., microwave trays ,dishes, bakery trays, deli containers, clam shell containers, drink cups

**PET Bottle Bale Grade Chart**

PET Bale Grade	Grade A	Grade B	Grade C	Grade F
Total PET Fraction by Weight	>94%	93% to 83%	82% to 73%	<72%
Total Amount of Contamination Allowed	6%	7% to 17%	18% to 27%	>28%

"PET fraction" refers to the total weight of PET bottles in a PET bale, inclusive of caps and labels when still attached to PET containers, as a percentage of the total weight of that bale.

Including closures (caps, lids, and rings) on bottles is acceptable. Removal of closures is also acceptable.

Total contaminants should not exceed the percentages, by weight, as defined by PET bale grades in chart above.

- High-Density Polyethylene (HDPE, #2) Rigid Plastic Containers
- Low Density Polyethylene (LDPE, #4) Rigid Plastic Containers
- Polypropylene (PP, #5) Rigid Plastic Containers
- Aluminum
- Metal containers or cans
- Paper or cardboard
- Liquid residues, primarily water (2% maximum allowed)

The following contaminants are not allowed at any level (zero percent allowed)

- Polyvinyl Chloride (PVC, #3) in any form
- Chemically incompatible low temperature melting materials, including Polystyrene (PS, #6) plastic and PLA plastic, as rigid or foam in any product.
- Chemically compatible low temperature melting materials, such as PETG
- Any plastic bags or plastic film
- Wood, glass, oils and grease
- Rocks, stones, mud, dirt
- Medical and hazardous waste
- Items containing degradable additives

**General:** Refer to the General Information section for additional information.

### HDPE Color Bottles

**Description:** Any whole, blow-molded, High-Density Polyethylene (HDPE, #2) 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. All bottles should be free of contents or free flowing liquids and rinsed.

**Product:** Bottles Only.

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed the percentages, by weight, as defined by the HDPE bale grade chart listed below.

### HDPE Bale Grade Chart

HDPE Bale Grade	Grade A	Grade B	Grade C	Grade F
Total HDPE Fraction by Weight	>95%	94% to 85%	84% to 80%	<79%
Total amount of contamination allowed	5 %	6% to 15%	16% to 20%	21%

“HDPE Fraction” refers to the total weight of HDPE bottles in a HDPE bale, inclusive of caps and labels when still attached to HDPE containers, as a percentage of the total weight of that bale

Including closures (caps, lids, and rings) on bottles is acceptable. Removal of closures is also acceptable.

No more than 2% of the following individual items are allowed :

- Polyethylene Terephthalate (PET, #1)
- Low Density Polyethylene (LDPE, #4)
- Polypropylene (PP, #5)
- Polystyrene (PS, #6)
- Other (#7)
- Liquid residues
- Aluminum
- Paper or cardboard

The following contaminants are not allowed at any level (zero percent allowed)

- Bulky rigids
- Any plastic with PLA or foaming agents
- Plastic bags or film
- Polyvinyl Chloride (PVC, #3) plastic in any form
- High-density Polyethylene (HDPE, #2) motor oil or other automotive fluid containers
- Metal
- Rocks, stones, mud, dirt
- Wood, glass, oils, grease
- Medical and hazardous waste

**General:** Refer to the General Information section for additional information.

### Tubs and Lids

**Description:** Any whole Polypropylene (PP, #5), High-Density Polyethylene (HDPE, #2), and/or Low Density Polyethylene (LDPE, #4), container generated through a positive sort from curbside, drop-off or other public or private recycling collection program. Tubs are containers that have a neck or mouth similar in size to its base. Lids

are caps for tubs that have a fastening feature other than threads. Examples include: yogurt cups, margarine tubs, ice cream tubs, cold drink cups (transparent, cold serve).

**Product:** Tubs and Lids

**Source:** Post-Consumer material generated from a curbside, drop off, or other public or private recycling collection program.

**Contamination:** Total contaminants should not exceed 10% by weight

The following levels of contamination are allowed:  
2% Maximum acceptable

- Metal;
- Paper/cardboard;
- Injection-molded High-Density Polyethylene (HDPE, #2);
- Polyethylene Terephthalate (PET, #1) Bottles or thermoforms);
- Any plastic containers or packaging including Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6), Other (#7);
- Liquid/other residues.

The following contaminants are not allowed at any level (zero percent allowed)

- Any plastic bags, sheets, or film;
- Wood, glass, electronics scrap;
- Oils, grease, rocks, mud, dirt;
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides;
- Medical and hazardous waste;
- Products with degradable additives.

**General:** Refer to the General Information section for additional information.

### Tubs and Lids w/Bulky Rigid Plastic

**Description:** Any whole Polypropylene (PP, #5), High-Density Polyethylene (HDPE, #2), and/or Low Density Polyethylene (LDPE, #4), container generated through a positive sort from curbside, drop-off or other public or private recycling collection program. Tubs are containers that have a neck or mouth similar in size to its base. Lids are caps for tubs that have a fastening feature other than threads. Bulky Rigid plastic is allowed. Examples include: yogurt cups, margarine tubs, ice cream tubs, cold drink cups (transparent, cold serve).

**Product:** Tubs and Lids

**Source:** Post-Consumer material generated from a curbside, drop off, or other public or private recycling collection program.

**Contamination:** Total contaminants should not exceed 10% by weight

The following levels of contamination are allowed:  
2% Maximum acceptable

- Metal;
- Paper/cardboard;
- Injection-molded High-Density Polyethylene (HDPE, #2);
- Polyethylene Terephthalate (PET, #1) Bottles or thermoforms);
- Any plastic containers or packaging including Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6), Other (#7);
- Liquid/other residues. (cont.)

The following contaminants are not allowed at any level (zero percent allowed)

- Any plastic bags, sheets, or film;
- Wood, glass, electronics scrap;
- Oils, grease, rocks, mud, dirt;
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides;
- Items with circuit boards or battery packs;
- Medical and hazardous waste;
- Products with degradable additives.

**General:** Refer to the General Information section for additional information.

### 1-7 Bottles and SMALL Rigid Plastic

**Description:** Rigid plastic generated in a positive sort from a curbside, drop-off, or other public or private recycling program that does not separately sort any plastic bottles. Bales consist of all plastic bottles—no bottles should be removed from the mix prior to baling—and household containers (including thermoform packaging, cups, trays, clamshells, food tubs and pots.

- Bulky rigid plastic, greater than 5 gallons, should be avoided (e.g., drums, crates, buckets, baskets, toys, totes and lawn furniture);
- Bales should consist of 65% bottles.

**Product:** Bottle and non-bottle containers

**Source:** Post-Consumer Material

**Contamination:** Total contaminants should not exceed 5% by weight

- 2% maximum acceptable
  - o Paper/cardboard
- 1% maximum acceptable
  - o Metal
  - o Plastic bags, sheets, film
  - o Liquid or other residues

The following contaminants are not allowed at any level (zero percent allowed)

- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Items with circuit boards or battery packs
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Medical and hazardous waste
- Products with degradable additives

**General:** Refer to the General Information section for additional information.

### 3-7 Bottles and SMALL Rigid Plastic

**Description:** Rigid plastic items generated in a positive sort from a curbside, drop-off, or other public or private recycling programs from which the Polyethylene Terephthalate (PET, #1) and High-Density Polyethylene (HDPE, #2) bottles have been removed. Pre-picked plastic consists of non-PET and non-HDPE household bottles and all non bottle containers including thermoform packaging, cups, trays, clamshells, food tubs and pots, and all large rigid plastics, primarily Polyethylene and Polypropylene (PP, #5) (includes plastic crates, carts, buckets, baskets and plastic lawn furniture). Metal, as typically found in toys or bucket handles, should be removed when possible. Plastic items from construction or demolition should not be included in Pre-Picked bales.

- Bulky rigid plastic, greater than 5 gallons, should be avoided (e.g., drums, crates, buckets, baskets, toys, totes and lawn furniture)

**Product:** Bottle and non-bottle Containers

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed 5% by weight

- 2% maximum acceptable
  - o Metal
  - o Paper/cardboard (2% maximum acceptable)
- 1% maximum acceptable
  - o Liquid or other residues (1 % maximum acceptable)

The following contaminants are not allowed at any level (zero percent allowed)

- Any plastic bags, sheets, or film
- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Items with circuit boards or battery packs
- Medical and hazardous waste
- Products with degradable additives

**General:** Refer to the General Information section for additional information.

### MRF Film

**Description:** Film collected and sorted at a MRF, typically generated from curbside collections consisting of HDPE grocery/retail bags, LDPE, or LLDPE films.

**Product:** Film

**Contamination:** Contaminants not to exceed 10% of loose paper, rigid plastics, non-ethylene film

**Prohibited Items:** NO food, trash, cans, glass, wood, oil, rocks, liquids, PET plastics, or PVC plastics.

**General:** Refer to the General Information section for more information.

### HDPE Natural Bottles

**Description:** Any whole, blow-molded, High-Density Polyethylene (HDPE, #2) containing the ASTM D7611 “#2, HDPE” resin identification code that is unpigmented, and was generated from a curbside, drop-off or public or private collection program. All bottles should be free of contents or free flowing liquids and rinsed.

**Product:** Bottles only

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed the percentages, by weight, as defined by the HDPE bale grade chart listed below.

### HDPE Bale Grade Chart

HDPE Bale Grade	Grade A	Grade B	Grade C	Grade F
Total HDPE Fraction by Weight	>95%	94% to 85%	84% to 80%	<79%
Total amount of contamination allowed	5 %	6% to 15%	16% to 20%	21%

“HDPE Fraction” refers to the total weight of HDPE bottles in a HDPE bale, inclusive of caps and labels when still attached to HDPE containers, as a percentage of the total weight of that bale

Including closures (caps, lids, and rings) on bottles is acceptable. Removal of closures is also acceptable. No more than 2% of the following individual items are allowed :

- Non-dairy pigmented High-Density Polyethylene (HDPE, #2) Bottles;
- Paper or Cardboard;
- Any other non-HDPE rigid plastic container;
- Liquid Residues;
- Packaging, including Polyethylene Terephthalate (PET, #1), Low Density Polyethylene (LDPE, #4);
- Aluminum
- Polypropylene (PP, #5), Polystyrene (PS, #6), Other (#7)
- Injection-molded High-Density Polyethylene (HDPE, #2) based cups, tubs, other wide-mouthed containers or non-bottle High-Density Polyethylene (HDPE, #2) materials.

The following contaminants are not allowed at any level (zero percent allowed)

- Pigmented white and yellow High-Density Polyethylene (HDPE, #2) milk jugs
- Bulky Rigids
- Any Plastics with PLA or Foaming Agents
- Wood, glass, oils, grease
- Rocks, Stones, Mud, Dirt
- Medical and Hazardous Waste
- Any plastic bags or film from any resin PVC (#3) in any form
- Metal

**General:** Refer to the General Information section for additional information

### Mixed Bulky Rigids

**Description:** Any large rigid High-Density Polyethylene (HDPE, #2) and/or Polypropylene (PP, #5) plastic bulky item, created through a positive sort from curbside, drop-off or other public or private recycling collection program. Examples include: crates, buckets, baskets, totes, and lawn furniture. Metal such as axels and bolts should be removed. Buckets/pails with metal handles can be included.

**Product:** Bulky Rigid Plastic

**Source:** Post-Consumer material created from a positive sort from a curbside, drop-off or other public or private recycling collection program.

**Contamination:** This bale should not contain mixed #1-7 bottles or containers, toys with metal, drums, jugs (either HMW or 55 gallons) or Polyvinyl Chloride (PVC, #3).

Total allowed - 15% by weight.

- Any plastic items or packaging including Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6) #7 Other (4% maximum acceptable) ;
- Metal ( 2% maximum acceptable);
- Liquid/other residues (2% max. acceptable);
- Wood (2% max);
- Paper/cardboard (2% maximum acceptable) ;
- Any plastic bags, sheets or film (2% max);
- Glass (2% max).

The following items are not allowed at any level (0% allowed):

- Oils, grease, rocks, mud, dirt;
- PS Foam and any other types of foam;
- Medical and hazardous waste;
- Products with degradable additives;
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides;
- Electronics scrap and items with circuit boards or battery packs;

**General:** Refer to the General Information section for more information

### PET Thermoforms

**Description:** Any whole Polyethylene Terephthalate (PET, #1) package labeled with the ASTM D7611 “#1, PET or PETE” resin identification code including and not limited to egg cartons, baskets, clamshell containers, cups, lids, cake domes, covers, blister pack without paperboard backing, tubs, deli containers, trays and folded PET sheet containers. All packages should be free of contents or free flowing liquids and rinsed. This grade does not include bottles and jars.

**Product:** PET Thermoform Plastic

**Source:** Post-Consumer material

**Contamination:** Including closures (caps, lids, and rings) on bottles is acceptable. Removal of closures is also acceptable.

Total contaminants should not exceed 5% by weight.

No more than 2% by weight of any of following individual contaminants will be allowed:

- Aluminum
- Metal containers or cans
- Loose paper or cardboard (cont.)

- Polystyrene
- PLA
- PVC
- PETG
- Liquid residues, primarily water (2% maximum allowed).

The following contaminants are not allowed at any level (zero percent allowed):

- Any plastic bags or plastic film
- Wood, glass, oils and grease
- Rocks, stones, mud, dirt
- Medical and hazardous waste
- Items containing degradable additives

**General:** Refer to the General Information section for additional information.

#### HDPE Injection Bulky Rigids

**Description:** Any injection grade #2 HDPE, typically found to be wide mouthed containers and/or oversized items generated through a positive sort from curbside, drop-off or other public or private recycling collection program. Examples include: carts, crates, buckets, baskets, lawn furniture, etc. Metal such as axels and bolts should be removed. Buckets/pails with metal handles are acceptable.

**Product:** Buckets, Pails, Oversized Rigid Plastics

**Source:** Post-Consumer Material

**Contamination:** The following levels of contamination are allowed

- 10% maximum acceptable
  - o Polypropylene (PP, #5)
- 4% maximum acceptable
  - o Polyethylene Terephthalate (PET, #1) plastics
  - o Polyvinyl Chloride (PVC, #3) plastics
  - o Low Density Polyethylene (LDPE, #4) plastics
  - o Polystyrene (PS, #6) plastics
  - o Other (#7)
- 2% maximum acceptable
  - o Metal
  - o Liquid or other residues
  - o Paper/cardboard

The following contaminants are not allowed at any level (zero percent allowed)

- Plastic bags, sheets, film
- Oil, grease, rocks, dirt
- Wood
- Glass
- Electronic scrap
- Medical and hazardous waste
- Products with degradable additives
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides

**General:** Refer to the General Information section for additional information.

#### Polypropylene SMALL Rigids Plastic

**Description:** Any Polypropylene (PP, #5) whole bottle, container product, generated through a positive sort from curbside, drop off or other public or private recycling collection program. Examples include: prescription bottles, yogurt cups, margarine tubs, ice cream tubs, cold drink cups, microwaveable trays, tofu tubs, dishwasher safe storage containers, hangers, bottle cap enclosures, etc.

- Bulky Polypropylene (PP, #5) plastic items greater than 5 gallons, should be avoided (e.g., drums, crates, buckets, baskets, toys, totes, and lawn furniture).

**Product:** Polypropylene Containers

**Source:** Post-Consumer Material

**Contamination:** Total contaminants should not exceed 8% by weight

The following levels of contamination are allowed

- 2% Maximum acceptable
  - o Metal
  - o Paper/Cardboard
  - o Liquid or other residue
  - o High-Density Polyethylene (HDPE, #2)
  - o Any plastic container or packaging containing Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6), Other (#7)

The following contaminants are not allowed at any level (zero percent allowed)

- Plastic bags, sheets, film
- Oil, grease, rocks, dirt
- Wood
- Glass
- Electronic scrap
- Medical and hazardous waste
- Products with degradable additives
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides

**General:** Refer to the General Information section for additional information.

#### Polypropylene All Rigid Plastic

**Description:** Any Polypropylene (PP, #5) whole bottle, container product, generated through a positive sort from curbside, drop off or other public or private recycling collection program. Bulky Polypropylene (PP, #5) are items greater than 5 gallons, (e.g. buckets, crates, waste baskets, toys, and storage bins).

**Examples include:** prescription bottles, yogurt cups, margarine tubs, ice cream tubs, cold drink cups, microwaveable trays, tofu tubs, dishwasher safe storage containers, hangers, bottle cap enclosures, etc.

**Product:** Polypropylene Containers

**Source:** Post-Consumer Material

**Contamination:** Total contaminants should not exceed 8% by weight

The following levels of contamination are allowed

- 2% Maximum acceptable
  - o Metal
  - o Paper/Cardboard
  - o Liquid or other residue

- o High-Density Polyethylene (HDPE, #2)
- o Any plastic container or packaging containing Polyethylene Terephthalate (PET, #1), Polyvinyl Chloride (PVC, #3), Polystyrene (PS, #6), Other (#7)

The following contaminants are not allowed at any level (zero percent allowed)

- Plastic bags, sheets, film
- Oil, grease, rocks, dirt
- Wood, glass, electronic scrap
- Medical and hazardous waste
- Products with degradable additives
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides

**General:** Refer to the General Information section for additional information.

### 1-7 Bottles and ALL Rigid Plastic

**Description:** Rigid plastic generated in a positive sort from a curbside, drop-off, or other public or private recycling program that does not separately sort any plastic bottles. Bales consist of all plastic bottles—no bottles should be removed from the mix prior to baling—and household containers (including thermoform packaging, cups, trays, clamshells, food tubs and pots, and bulky rigid plastic (e.g., drums, crates, buckets, baskets, toys, totes and lawn furniture).

**Product:** Bottle and non-bottle containers

**Source:** Post-Consumer Material

**Contamination:** Total contaminants should not exceed 5% by weight

- 2% maximum acceptable
  - o Paper/cardboard
- 1% maximum acceptable
  - o Metal
  - o Plastic bags, sheets, film
  - o Liquid or other residues

The following contaminants are not allowed at any level (zero percent allowed)

- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Items with circuit boards or battery packs
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Medical and hazardous waste
- Products with degradable additives

**General:** Refer to the General Information section for additional information.

### 3-7 Bottles and ALL Other Rigid Plastic

**Description:** Rigid plastic items generated in a positive sort from a curbside, drop-off, or other public or private recycling programs from which the Polyethylene Terephthalate (PET, #1) and High-Density Polyethylene (HDPE, #2) bottles have been removed. Pre-picked plastic consists of non-PET and non-HDPE household bottles and all non bottle containers including thermoform packaging, cups, trays, clamshells, food tubs and pots, and all large rigid plastics, primarily PE and PP (includes plastic crates, carts, buckets, baskets and plastic lawn furniture). Metal, as typically found in toys or bucket handles, should be

removed when possible. Plastic items from construction or demolition should not be included in Pre-Picked bales.

**Product:** Bottle and non-bottle Containers

**Source:** Post-Consumer material

**Contamination:** The following levels of contamination are allowed

- 5% Maximum acceptable
  - o Metal ( 2% maximum acceptable)
  - o Paper/cardboard (2% maximum acceptable)
  - o Liquid or other residues (1 % maximum acceptable)

The following contaminants are not allowed at any level (zero percent allowed)

- Any plastic bags, sheets, or film
- Wood, glass, electronics scrap
- Oils, grease, rocks, mud, dirt
- Containers which held flammable, corrosive or reactive products, pesticides or herbicides.
- Items with circuit boards or battery packs
- Medical and hazardous waste
- Products with degradable additives

**General:** Refer to the General Information section for additional information.

### PE Retail Mix Film

**Description:** Any polyethylene bag and overwrap accepted by retailers from their customers or polyethylene stretch wrap or other film generated back of house may be included. Bags may be mixed color or printed and primarily High-Density Polyethylene (HDPE, #2) but are expected to include other polyethylene bags and LDPE/LLDPE overwrap. Films may be coded with ASTM D7611 resin identification code “#2, HDPE” and #4, LDPE”. All bag bundles should be free of free-flowing liquids.

**Product:** Mixed Film

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed 5% by weight.

- Non-polyethylene other plastics;
- Loose Paper;
- Strapping, twine or tape;
- Liquid residue (2% maximum).

The following contaminants are not allowed at any level (zero percent allowed)

- Medical and hazardous waste;
- Food waste;
- Wood;
- Glass;
- Oils and Grease;
- Rocks, stones, mud, dirt;
- Metallized labels or films;
- Multi-material pouches;
- Silicone coated film;
- Film with oxo or bio-degradable additives;
- PVDC layers;
- Acrylic coatings;

**General:** Refer to the General Information section for additional information.

**LDPE Colored Film**

**Description:** Any mixture of natural translucent Low Density Polyethylene (LDPE, #4) film and mixed color translucent Low Density Polyethylene (LDPE, #4) film with limited label contamination is acceptable. Films may be coded with ASTM D7611 resin identification code #4, LDPE. All film bundles should be free of free-flowing liquids.

**Product:** LDPE Colored Film

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed 2% by weight. No more than 2% by weight of any of following individual contaminants will be allowed:

- Non-polyethylene other plastics;
- Labels;
- Water.

The following contaminants are not allowed at any level (zero percent allowed)

- Medical and hazardous waste
- Wood
- Glass
- Oils and Grease
- Rocks, stones, mud, dirt
- Metallized labels or films
- Multi-material pouches
- Silicone coated film
- Film with oxo or bio-degradable additives
- PVDC layers

**General:** Refer to the General Information section for additional information.

**LDPE Furniture Mix**

**Description:** Any mixture of natural Low Density Polyethylene (LDPE, #4) film used for sofa overwrap, bubble wrap, mattress bag and Linear Low Density Polyethylene (LLDPE, #4) stretch film and polyethylene thin foam which is white and gray foam backed with LDPE film. Color contribution can be only from the white foam, gray foam backed with LDPE film, and blue mattress bags. The mass shall consist of 70% to 80% LDPE and/or LLDPE films and the remainder polyethylene foam. Films may be coded with ASTM D7611 resin identification code #4, LDPE. All film bundles should be free of free-flowing liquids.

**Product:** LDPE or LLDPE Film

**Source:** Post-Consumer material

**Contamination:** Total contaminants should not exceed 2% by weight. No more than 2% by weight of any of following individual contaminants will be allowed:

- Non-polyethylene other plastics;
- Labels;
- Water.

The following contaminants are not allowed at any level (zero percent allowed)

- Medical and hazardous waste
- Wood
- Glass
- Oils and Grease
- Rocks, stones, mud, dirt
- Metallized labels or films

- Multi-material pouches
- Silicone coated film
- Film with oxo or bio-degradable additives
- PVDC layers
- Acrylic coatings

**General:** Refer to the General Information section for additional information.

**PE Clear Film**

**Description:** Any mix of natural polyethylene, High-Density Polyethylene (HDPE, #2), Low Density Polyethylene (LDPE, #4) or Linear Low Density Polyethylene (LLDPE, #4) film,

**PE Clear Film Description Variances**

Grade B	Grade C
80% clear, up to 20% color, clean and Natural LDPE and/or LDPE films.	50% clear, 50% color, dry, LDPE or LLDPE Films

totaling at least 95% clear or natural polyethylene film is accepted. Films may be coded with ASTM D7611 resin identification code.

**Product:** Polyethylene film

**Source:** Post-Consumer or Post-Commercial material

**Contamination:** Total contaminants should not exceed 5% by weight.

- Pigmented polyethylene films
- Non-polyethylene other plastics such as strapping
- Labels,
- Liquid residue (2% maximum).

The following contaminants are not allowed at any level (zero percent allowed)

- Medical and hazardous waste
- Wood
- Glass
- Oils and Grease
- Rocks, stones, mud, dirt
- Metallized labels or films
- Multi-material pouches
- Silicone coated film
- Film with oxo or bio-degradable additives
- PVDC layers
- Acrylic coatings

**General:** Refer to the General Information section for additional information.

**Agricultural Greenhouse Film**

Films not used on the ground for agriculture or farming. Examples of which may be bale wrap, greenhouse films, dairy bags and bunker silo films which are polyethylene based.

**Product:** Film

**Contamination:** Contaminants not to exceed 20% of non-PE film, dirt, rocks, or moisture.

**Prohibited Items:** NO food, trash, cans, glass, wood, or oil

**General:** Refer to the General Information section for more information.



**Agricultural Ground Cover Film**

Any film collected after in field use. Examples of which may be mulch film and irrigation (drip) tubing which is polyethylene based.

**Product:** Film

**Contamination:** Contaminants not to exceed 50% of non-PE Film, dirt, rocks, or moisture.

**Prohibited Items:** NO food, trash, cans, glass, wood or oil.

**General:** Refer to the General Information section for more information.

**Post-Consumer TPO Plastic Automotive Bumper Covers**

**Description:** This grade consists of painted auto bumper covers removed from motor vehicles.

**Product:** Post-Consumer Auto Part

**Source:** Post-Consumer material generated by collision or refurbishment centers or automobile dismantlers.

**Contamination:** The following parts must be removed from the bumper cover: head lamps, tail lamps, grills, emblems, rub strips, reflectors, and any other components attached to the bumper. Everything attached to the bumper cover should be removed before baling. Contamination should be limited to small metal parts such as clips, bolts, and screws.

No TPU or RIM Plastic allowed.

**General:** Refer to the "General Information" section for more information.

**Rigid PVC—Siding**

**Description:** Typically consists of PVC siding used in residential applications. May contain PVC downspouts. Not all siding is PVC and may contain PE variants, which are typically molded. Recyclability and market value increases with additional color segregation.

**Product:** PVC Bale

**Source:** Installed or Uninstalled Material

**Technical Information:** Hardness Level > 65D. Rigid PVC does not contain plasticizer and will typically measure above 65 on the Shore D scale.

**Explanation of the Shore Scale:** Shore durometer measurement devices can be used to measure the indentation of a prescribed needle into the material. The test method conforms to ASTM D2240.

**Contamination:**

Prohibitives—Material not accepted at any level, 0% allowed.

- a. PET plastic of any form
- b. Insulation
- c. Medical and hazardous waste
- d. Lead or cadmium stabilized rigid PVC materials,
- e. Materials containing asbestos fillers or reinforcement.
- f. Used household soil or waste plumbing lines with visible bioresidue. (May have debris and paper)
- g. CPVC—should be separated and marketed separately—typically includes pipe and molded fittings and runners;

Contamination material allowed at small percentages:

- a. Plastics other than PVC such as HDPE, LDPE, PP, PS
- b. Foamed PVC
- c. Liquids
- d. Paper & Cardboard
- e. Ferrous and Non-Ferrous Metals

- f. Rocks, Stones, Mud, Dirt
- g. Wood, Glass, Oils, Grease

**General:** Refer to the General Information section for additional information.

**Rigid PVC—Pipe**

**Description:** PVC pipe that is round in shape and can be green, white, blue, purple and grey in color. Comes from installed and un-installed sources or scrap. Is mainly used in water plumbing applications. Care should be taken when compressing the bale as too much pressure will crush material and make identification and inspection difficult. Recyclability and market value increases with additional color segregation.

**Product:** PVC Bale

**Source:** Installed or Uninstalled Material

**Technical Information:** Hardness Level > 65D. Rigid PVC does not contain plasticizer and will typically measure above 65 on the Shore D scale.

**Explanation of the Shore Scale:** Shore durometer measurement devices can be used to measure the indentation of a prescribed needle into the material. The test method conforms to ASTM D2240.

**Contamination:**

Prohibitives—material not accepted at any level, 0% allowed.

- a. CPVC (typically gray electrical conduit)
- b. PET plastic of any form
- c. Medical and hazardous waste
- d. Lead or cadmium stabilized rigid PVC materials,
- e. Materials containing asbestos fillers or reinforcement.
- f. Used household soil or waste plumbing lines with visible bioresidue. (May have debris and paper)
- g. ABS

Contamination material allowed at small percentages:

- a. Plastics other than PVC such as HDPE, LDPE, PP, PS
- b. Foamed PVC
- c. Liquids
- d. Paper & Cardboard
- e. Ferrous and Non-Ferrous Metals
- f. Rocks, Stones, Mud, Dirt
- g. Wood, Glass, Oils, Grease

**General:** Refer to the General Information section for additional information.

**Rigid PVC—Window Profiles**

**Descriptions:** Typically consists of window and door frames. Sourced primarily from door and window manufacturers.

**Product:** PVC Bale

**Source:** Installed or Uninstalled Material

**Technical Information:** Hardness Level > 65D. Rigid PVC does not contain plasticizer and will typically measure above 65 on the Shore D scale.

**Explanation of the Shore Scale:** Shore durometer measurement devices can be used to measure the indentation of a prescribed needle into the material. The test method conforms to ASTM D2240.

**Contamination:**

Prohibitives—material not accepted at any level, 0% allowed.

- a. Loose rubber weather stripping
- b. Glass

- c. Metal
- d. PET plastic of any form
- e. Medical and hazardous waste
- f. Lead or cadmium stabilized rigid PVC materials,
- g. Materials containing asbestos fillers or reinforcement.
- h. Used household soil or waste plumbing lines with visible bioresidue. (May have debris and paper)
- i. CPVC—should be separated and marketed separately – typically includes pipe and molded fittings and runners;

Contamination material allowed at small percentages:

- h. Plastics other than PVC such as HDPE, LDPE, PP, PS
- i. Foamed PVC
- j. Liquids
- k. Paper & Cardboard
- l. Ferrous and Non-Ferrous Metals
- m. Rocks, Stones, Mud, Dirt
- n. Wood, Glass, Oils, Grease

**General:** Refer to the General Information section for additional information.

#### **Flexible PVC**

**Description:** Typically consists of molding, weather stripping, flexible tubing, purging, battery covers, medical tubing, auto decals, flexible films and sheeting. It is typically resistant to chemicals, non-porous and extruded. It can be found in long profiles and can be wound onto a reel.

**Product:** PVC Bale

**Source:** Post-Consumer or Post Industrial (including Pre-consumer)

**Technical Information:** Durometer Level less than 90A

**Explanation of the Durometer Scale:** Explanation of the Shore Scale: Shore durometer measurement devices can be used to measure the indentation of a prescribed needle into the material. The test method conforms to ASTM D2240. Flexible PVC is typically measured using the A scale.

#### **Contamination:**

Prohibitives—material not accepted at any level, 0% allowed.

- a. PET plastic of any form
  - b. Medical and hazardous waste
- Contamination material allowed at small percentages
- a. Plastics other than PVC such as HDPE, LDPE, PP, PS
  - b. Rigid PVC
  - c. Liquids
  - d. Paper & Cardboard
  - e. Ferrous and Non-Ferrous Metals
  - f. Glue, adhesives, sticky tape
  - g. Co-extruded materials
  - h. Reinforcement weaves and fabrics

**General:** Refer to the General Information section for additional information.