Recyclable Packaging Materials
Selection and Identification

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NOTICE FOR REVISION P12254 - May 30, 2024: Section 2 has significant changes in this release, which must be reviewed and implemented immediately upon the receipt of this revised specification.

- Section 2.2.1 Requirements and Guidelines for Recycled Content, requires that essential non-exempted plastic packaging components incorporate a minimum of 30% recycled content, be 100% reusable and recyclable, or be compostable.
- Section 2.2.2 and 2.3 detail changes in graphics for resin identification codes, moving from a mobius strip to a triangle.

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For convenience, new content in this version will be in blue text. Deleted items are not noted except as mentioned below.

Hardcopy printout is only valid on the date of printing. The online version applies.

Change History

Date	EC	Description
May-2008	L80729	• Added Waste Bin symbol per EU Battery Directive (see Section 2.3) • Added guidance note regarding the "Green Dot" (table 7)
Aug-2012	L81024	• Added "***Batteries - Europe Only"*** wording to accompany the Waste Bin symbol. • Also, see important additions on Chinese packaging marking requirements based on actual inspections that have held up shipments. See pages 8, 9 and 20
May 2012	L80800K L80800L	• Section 4, Updated Korean Symbols (must be implemented by July 1, 2012) • Revised trash bin symbol (removing "Europe Only" wording) • Updated Table 4 on page 8 with new recycling symbols and removed Chinese codes • Updated definitions of Rigid Plastic Packaging Containers and Guidance
Nov 2013	L80800M	• Updated table 4 to reflect removal of Chinese marking codes and add new images. • Guidance notes related to material markings (2.3) and usage of the folded ribbon symbol (2.4.1) sometimes referred to as the Mobius loop. • Removal of Japanese recycling markings (apply only to consumer goods). • Reorganization to create new section 2.4 for "Other Markings" including folded ribbon (2.4.1), Waste Bin, (2.4.2) and Dangerous goods markings (2.4.3). • Added numerous new terms and definitions into section 4.
Jan 2018	L11779	• Modified to stay in concert with EPEAT Server Standard NSF/ANSI 426-2017
May 2024	P12254	• Significant update to minimum recycled content requirement. Change to resin identification symbol – removal of racing arrows (ASTM), Removal of Hazmat / Battery text (covered in other specs), remove mobius loop for corrugated

1.0 Introduction

1.1 Abstract

IBM uses a comprehensive waste management system to reduce the impact of its waste materials on the solid waste stream. This integrated system emphasizes source reduction and recycling programs prior to investigating alternatives for disposal.
Material recycling strategies will focus upon the use of:

1. Recycled material(s) in packaging,
2. Other materials which provide a resource for secondary applications (e.g., recyclable materials).

1.2 Purpose

- To establish parameters for the recycled content to be included in corrugated and plastic packaging.
- To reduce and/or eliminate the use of non-recyclable materials or materials compositions that prevent or hinder the recycling of IBM packaging after use.
- To promote recycling by providing information (in the form of markings) which will increase the likelihood that packaging materials will be recycled as well as ease and support recovery processes (collection, separation, recycling).

1.3 Compliance

Compliance with the requirements herein will be enforced as a condition of purchase per IBM Procurement Contracts. When the requirements of this specification conflict with applicable governmental regulations, the more stringent requirement shall take precedence.

Related international standards include ASTM D7611, ISO 11469, DIN 6120 (Germany), ISO 1043, and the Korean “Extended Producer Responsibility” law (1/2003) and the new EPEAT standard applicable to Server Products (NSF/ANSI 426-2017, chapter 8). This specification (5897660) aims to comply with all of these; routinely applied to all subject materials regardless of origin or destination.

1.4 Scope

This specification considers two ways recycling may be used to reduce IBM’s contribution to the solid waste streams.

- It requires proper marking of materials to direct for recycling and limit what would otherwise be sent to a landfill.
- It puts requirements on the use of recycled materials in the production of IBM Packaging to limit the amount of raw or virgin materials to conserve natural resources.

1.5 Application

- This specification applies to all primary, secondary, and tertiary packaging for products, devices, parts, subassemblies, materials, and supplies purchased by IBM for use in its manufacturing and distribution operations.
- This specification applies to all packaging used in protecting, handling, or marketing of IBM logo products, parts and supplies including those manufactured by an OEM (original equipment manufacturer)
- This specification applies to, but is not limited to, the following packaging materials and packaging components:
  - Molded plastic cushions (of any resin), fabricated plastic cushions (of any resin), rigid and flexible plastics (bags and wraps), corrugated fiberboard, paperboard or other pulp-based parts, wooden pallets, crates, and skids

1.6 Referenced Documents

The following represent the regulatory force behind these requirements in the various countries that are affected or an internationally recognized standard (ISO, DIN, etc.).

Table 1: External Documents and Standards

Country	Document Title / Description
Korea	Separate Discharge Marks for Packaging
ASTM D7611	Standard Practice for Coding Plastic Manufactured Articles For Resin Identification
ISO 11469	"Plastics -- Generic identification and marking of plastics products"
ISO 1043	Plastics -- Symbol and abbreviated terms (4 parts):
	Part 1: Basic polymers and their special characteristics
	Part 2: Fillers and reinforcing materials
	Part 3: Plasticizers
	Part 4: Flame Retardants
Germany	**DIN 6120-1**: Marking of Packaging and Packing Material for the Purpose of Recovery - Plastics Packaging and Packing Material - Part 1: Artwork / Graphics
	DIN 6120-2: Marking of Packaging and Packing Material for the Purpose of Recovery - Plastics Packaging and Packing Material - Part 2: Additional Marking
EU	EU Battery Directive: 2006/66/EC and EU Packaging Directive 96/62/EC (2005/20/EC) EU Decision on material identification no. **97/129/EC**

Table 2: Related IBM Internal Documents

Part No.	Document Title / Description
31L5345	[same as] GA21-9261: "Packaging and Handling: Supplier and Interplant Requirements"
37L8024	Wooden Packaging, Materials Selection, Treatment and Identification
IBM Information for Suppliers Website: https://www.ibm.com/procurement/ossi	

2.0 Requirements

Korean marking requirements are now a part of this specification. In short, this means that packaging materials subject to identification marking requirements will bear the traditional symbols included herein and **in addition** will bear the Korean symbol(s). Refer to table 4 for a convenient summary of these symbols. For artwork, refer to the official Korean web site for downloadable files.

General Rule for Augmenting Recycling per NSF/ANSI 426-2017, section 8.2.1:

a) All non-reusable packaging components ≥25 g shall be separable by material type, including by plastic material type as specified in b) below, using only commonly available tools. The following are exempt from this requirement: labels affixed to plastics bags or wraps, tape, staples, co-laminated materials for purposes of moisture or ESD barrier protection, and plastic bags over expanded foam.

b) All plastic packaging components ≥ 25 g shall be clearly marked with material type in accordance with ISO 11469/1043, ASTM D7611/D7611M, or DIN. The following are exempt from this requirement: plastic protective films, stretch wraps, strapping, and expanded polyurethane foam.

2.1 Cellulosic Materials

2.1.1 Performance of Recycled Paper Products

The following principles should be adopted to achieve maximum performance from recycled paper products:

- Use a recycled fiber source of premium grade (long fiber length).
- Use a recycled fiber source that is free of contaminants.

Please note the use of recycled fiber can result in lower performance. High-performance corrugated packaging is best achieved through the specification of performance properties (e.g., burst and compression strength).

2.1.2 Guidelines for Recycled Fiber Content

Corrugated fiberboard packaging must be manufactured using a **minimum of 45%** recycled fiber content with an aspirational goal of 50%. Suppliers should use the maximum available post-consumer content where adequate supplies exist. If the recycled content far exceeds 50% for external primary cartons or over packs, it should be noted that risks increase for performance in humid environments with longer storage times, as burst and crush resistance decreases in most types of fiberboard. Additional performance testing should be conducted for static compression if >60% recycled content fiberboard is used for outer primary and overpacks. Higher recycled content percentages can be used for interior pads, dividers and other less critical applications without restriction or additional testing.

Fiber-based packaging materials derived from alternative sources to traditional paper mill products are exempt from this recycled fiber requirement and shall not be included in the calculation of recycled content of a complete package assembly. Examples of alternative sources include, but are not limited to, kenaf, bamboo, and mushroom mycelium.

Table 1: Recommended Recycled Fiber Content Levels for Paperboard and Packaging Products

Description	**Recycled Content (%)**
Corrugated containers:	45
Padded mailers	100
Brown papers (e.g., wrapping paper and bags)	100

2.1.3 Recycling Aids for Second-Generation Cellulosic Materials

IBM's goal is to reduce or eliminate the use of non-essential non-recyclable packaging materials and packaging materials compositions that hinder recycling. The performance of any recycled paper products may be enhanced by incorporating any or all of these IBM required practices that apply. Refer to GA21-9261 for suggested alternatives:

IBM Requirements:

- Eliminate the use of adhesives to commingle materials (e.g., foam cushions glued to a corrugated pad). All materials should be easily separatable in recycling.
- Do not use bleached white corrugated board or oyster white board.
- Do not use mineral oils in printing ink for cartons or bags, or in any other method of treatment of this packaging. Use water / soy-based inks when printing packaging materials.
- Use only functional coatings or impregnating that does not adversely affect material recycling. Some coatings that aid resistance to water, grease, or scuffing may be used with no adverse effect on material recycling. Avoid wax based coatings.
- Do not use film laminations and/or cross-linked resins such as urea formaldehyde or polyethylene coated paperboard or solid bleached sulfate (SBS). Exceptions may apply for packaging designed for reuse, barrier and ESD bags, and must be approved by IBM Packaging Engineering.

2.2 Polymeric Materials

2.2.1 Requirements and Guidelines for Recycled Resin Content

To reduce the environmental impacts of our product packaging, IBM requires the elimination of nonessential plastic packaging from IBM logo hardware products by year-end 2024. Suppliers should use renewable or compostable materials where possible, preserving the use of materials.

All essential plastic packaging is required to incorporate a minimum of 30% recycled content, be 100% reusable and recyclable, or be compostable. The exceptions are: Electrostatic Shielding Bags (ESD), metalized barrier bags, some types of machine applied stretch wrap. Other exceptions must be approved by IBM Packaging Engineering.

Packaging must be manufactured using the maximum possible post-consumer recycled resin. This requirement is contingent upon several factors, including the existence of processes that produce equivalent performing materials. The percentage of post-consumer content technically achievable depends on the chemistry of the material utilized, the performance requirements of its end use application, and the availability of usable post-consumer recycled feed stocks. It is IBM's intention for suppliers to assess and certify the use of recycled resin for IBM applications and utilize the maximum percentage content practicable.

Note: Rigid plastic packaging containers (RPPCs) with a minimum capacity of 0.236 liters (eight ounces) or its equivalent volume and a maximum capacity of 19 liters (five gallons) or its equivalent volume must comply with the California RPPC regulation regardless of origin or destination. Refer to 5897660, section 2 (17) for additional details.

2.2.2 Marking of the Resin Identifier

Molded Parts

When marking a molded plastic piece with the resin identifier, it is recommended that the identifier be embossed on the part ejection pins. Because the pins are not an integral part of the mold, the molder selects the appropriately marked pin whenever new parts are molded. This method of imprinting is preferred as this process allows flexibility in resin recycled content identification. It also adds little expense to tool development or the piece price of molded cushion parts.

Fabricated Parts

It is recommended that fabricated parts including those made of polyurethane or polyethylene similarly apply the resin identifier using either hot wire imprinting or a stamp which prints the appropriate mark using permanent ink. Caution must be used when selecting the ink and location to ensure it does not smear or transfer to the machine covers. Each individual component must be marked. The marking may be applied with a small permanent label if that is the only way to achieve compliance.

Resin Identification Codes - Design

Symbols should comply with the most current version of American Society of Testing Materials (ASTM) D7611. https://www.astm.org/d7611_d7611m-21.html

American Society of Testing Materials (ASTM) D7611 – Standard Practice for Coding Plastic Manufactured Articles for Resin Identification, the recognized standard for products packaged in plastic rigid containers, is used to assist recyclers in sorting plastic containers by resin composition. As well, the European Union (EU) Commission Decision 97/129/EC on material identification establishes a similar series of numbers and abbreviations for material type markings. These systems provide consistent national identification markings intended to meet the needs of the plastic recycling industry.

The Resin Identification Code will consist of three main components as shown in the example below:

1) An equilateral triangle with solid lines.

2) A specific number which corresponds to the type of material located in the center of the triangle. (See Table 4)

3) Abbreviation located below the triangle which identifies the plastic material type. (Note: Abbreviation may vary slightly based on country)

The original version of the SPI resin identification code used a chasing arrow triangle instead of the solid line triangle. The chasing arrow symbol should not be used on new tooling moving forward. Existing tooling using the chasing arrows should replace the arrows with the solid-line equilateral triangle.

2.3 Material Markings

Table 1: Summary of Packaging Material Categories and their respective Identification Codes

Material Category	Others See 2.4 & 3.0	Packaging Material Description	Material Abbreviation	Code Numbers
Plastics		Polyethylene Terephthalate	PET(E)	1
		High Density Polyethylene	HDPE	2
		Polyvinyl Chloride (1)	PVC	3
		Low Density Polyethylene	LDPE	4
		Polypropylene	PP	5
		Polystyrene (includes Arcel®)	PS	6
		Others (includes Polyurethane)	Other	7

Korea

Paper 	**See also 2.4.1 (Folded Ribbon Recycling Symbol)**	Corrugated Fiberboard (2)	PAP	20
		Non-Corrugated Fiberboard	PAP	21
		Paper	PAP	22
		Paperboard	PAP	23
Metals  		Steel	FE	40
		Aluminum	ALU	41
		Others reserved for future use (TBD)		42-49
Wood 		Wood (see also 37L8024)	FOR	50
		Cork	FOR	51
		Others reserved for future use (TBD)	FOR	52-59
Fabric 		Cotton	TEX	60
		Jute	TEX	61
		Others reserved for future use (TBD)	TEX	62-69
Glass 		Colorless Glass	GL	70
		Brown Glass	GL	71
		Green Glass	GL	72
	For more >>>	http://en.wikipedia.org/wiki/Recycling_codes		
Composites 		Paper and cardboard / various metals	C/**	80
		Paper and cardboard / plastics	C/**	81
		Paper and cardboard / aluminum	C/**	82
		Paper and cardboard / steel tinplate	C/**	83
		Paper and cardboard / plastics / alum / steel	C/**	84
		Paper and cardboard / plastics / aluminum	C/**	85
		Plastics / Aluminum	C/**	90
		Plastics / steel tinplate	C/**	91
		Plastics / various metals	C/**	92

** The predominant material of the composite structure follows the C/ marking on composites

Guidance Notes: Although codes have been assigned for various materials in the EU, aside from plastics, they are not commonly used and are considered to be voluntary. If any item is being printed anyway, use the applicable symbols also. If an item is not printed at all (example stretch wrap) marking is not mandatory UNLESS it was printed on for other reasons in which case the markings should be added.

(1) Reminder: IBM prohibits the use of PVC (polyvinyl chloride) for packaging applications.
(2) The PAP symbol is now specified for corrugated fiberboard and all paper-based packaging materials but rework and retooling of existing printing plates is not required. It may be phased in over time.

2.4 Responsibilities of IBM's Suppliers

These requirements apply to all packaging materials used to make shipments to IBM or to customers on IBM's behalf. They also apply to all packaging materials purchased by IBM, and subsequently used by IBM for its products, parts, and supplies shipments.

Suppliers who design packages for shipment of parts, options, supplies, or products **must ensure** that they utilize materials and methods which are conducive to recycling. Examples that introduce contaminants which would preclude the subsequent recycling of packaging materials are:

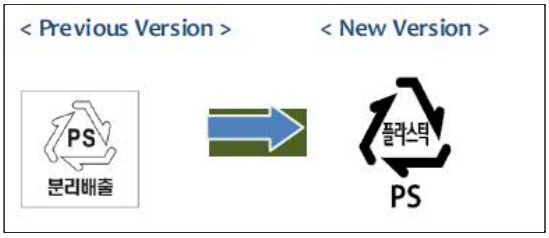
- The use of free-rise foam-in-place where foam is dispensed directly into the corrugated container, or
- The use of adhesives to commingle materials (e.g., polyethylene foam glued to a corrugated pad).
- In addition, avoid the specification of colors which may inhibit recycling.

Suppliers who use packaging materials for shipments to IBM or sell packaging materials to IBM, but do not manufacture and monitor all phases of the material production, shall verify that their supplier conforms to the requirements identified above.

Suppliers should contact IBM Procurement if they need assistance in understanding these responsibilities.

2.5 Korean Discharge Marks for Packaging

The scope of this law that affects IBM products is almost all packaging materials of plastic resin, in particular that used for foam cushions ("buffers"), bags, and clamshells are applicable. Material initials are derived from ISO 11469. The updated marks are **mandatory** for almost all electronic and electrical products sold in Korea. Markings must be as large as practical but must be at least 8 mm x 8 mm or larger. Direct printing or embossing (molded in) is preferred but an attached label may also be used if necessary.



Executive Summary for all Electronic / Electrical Items (finished goods) shipped to Korea. The primary focus is on plastic "buffers" (or cushions) and film or sheet type plastics used for bags, thermoformed clamshells and so on made of PS, PP, PE, and OTHER.

Mark (mandatory): Molded and Fabricated Foam Cushions, poly bags, ESD bags, Padded Envelopes and other cushioned plastic wraps or bags including microfoam and Bubble Wrap used **for Finished Goods (Systems) AND Options**.

Optional (Out of Scope): Corrugated boxes or inserts, tape, banding, stretch wrap, Molded [Paper] Pulp, paper cushions (ie. Pad Pak and similar) or any packaging for **FRU's** (field replacement units), Spare Parts, components including inbound parts destined for manufacturing consumption. FRU's are out of scope because they are not SOLD.

Additional Exemptions include the following types of packaging:

- Packaging materials whose surface is less than 50cm^2 (7.72 in^2).
- Plastic sheet and film with a surface area less than 100 cm^2 (15.5 in²). Plastic bags are included in the scope of plastic sheet and film. Example for bags: A 6 cm wide x 10 cm tall bag uses 120 cm² plastic film (60 cm^2 x 2 sides = 120 cm^2) which exceeds the 100 cm² limit and must be marked unless otherwise exempt.
- Packaging material on which it is technically difficult to print, engrave, or label due to elements or structural properties. One example would be polyurethane foam.
- Plastic film or sheet packaging materials with a thickness less than 20 microns (µm).
- Plastic bags, plastic sheet, and plastic film packaging materials that do not have any printing, engraving, embossing, or labeling are not required to carry the Korean discharge mark. However, if they are marked with ANY information (for instance, PN's) they must carry the discharge mark.

Exempted Products: Packaging for the following products are exempt from the Korean discharge marking requirements; ***however, we are specifying that the markings still be routinely applied anyway for the focus materials regardless of origin or destination due to inconsistent enforcement by authorities and due to client requests. Exceptions to this policy should be reviewed and approved by IBM Packaging Engineering.***

- Rack mounted server consoles, mass storage, switches and their associated displays and keyboards are out of scope.
- Barcode printers, label printers, receipt printers, bank book printers, graphics-only printers, plotters are out of scope.
- Uninterruptible Power Supplies with a capacity of more than 10 KVA.

Table 2: Korean Packaging Material Identification Requirements (revised)

Material Description (Shown only are those that are likely to exist in IBM).	Korean Discharge Marks: The use of colors is not mandatory for the marking of plastics (may be black/white), but if colors ARE used they must be per the Korean Graphics Standard. Symbols shown in BLUE would be for solid plastics Symbols shown in PURPLE would be for flexible film and sheet type plastics. The Korean words inside are the symbols are different for each type.	
	Symbols for SOLID Plastics (including foam cushions ie. "Buffers")	Symbols for FILM and SHEET Plastics
Polystyrene (EPS or PS) Ref: #6 on the SPI scale Note: ARCEL™ qualifies for this symbol since it is also marked as #6 on the SPI scale.		
HIGH Density Polyethylene (HDPE) Ref: #2 on the SPI system. Note: The proportions shown in this example apply to all Korean symbols.		

LOW Density Polyethylene (LDPE) **Ref: #4 on the SPI system.**		
Polypropylene (EPP or PP) **Ref: #5 on the SPI scale**		
OTHER: May include the following: • **Composite Materials (mixed resins) such as ESD bags** **Ref: #7 on the SPI scale**		
Note: Korean markings also exist for PET, PVC, Paper, Aluminum, Steel, Glass and other specialty items which should not apply to IBM packaging subject to this regulation or are optional.		

4.0 Definitions and Key Words

Some of these terms may not be explicitly mentioned in this specification but may be relevant when evaluating requirements provided in the specification.

Biodegradable	Capable of being slowly decomposed by biological agents or other natural processes, bacteria, etc.
Oxo-biodegradable (plastics)	See full explanation here: http://en.wikipedia.org/wiki/Oxo_Biodegradable
Buffer	Another word for “foam cushion” in Korea. Specifically, packing materials that are made from foam-like single synthetic resins, which are made of beads containing hydrocarbons such as butane, hexane, pentane, etc., puffed by applying heat, or by other means. Examples of "buffer" materials: expanded polystyrene (EPS), expanded polyethylene (EPE) and expanded polypropylene (EPP).
Cellulosic	A substance made of natural plant parts including wood, paper
Commingle	To intermix dissimilar materials.
Composite	A material or package made of a combination of dissimilar materials which cannot be separated manually. Example: An ESD bag made of a co-lamination of Polyethylene, Polyester and Aluminum.
Discharge Mark (Korea)	A marking placed on the packaging materials to support recycling efforts.
Expanded Foam	Expanded resinous material with a cellular structure, manufactured by the dispersion of a gas in the liquid resin, and the subsequent setting of the expanded mass.
Fabricated Foam	Foam, usually expanded and extruded in plank form, that is cut and/or bonded into its final useful form.
Flexible Container	A plastic container that can be flexed and twisted, without the aid of tools, without damaging the container.
Foam-In-Place	Two liquid components combined under heat to produce a polyurethane foam which is cast and formed around a particular shape. This process may be performed in either of two ways: A. Using a mold, as with pre molding where finished cushions will be sent to the packager. B. Using only the item to be packaged and the shipping carton, as with free-rise foam-in-place.
High Grade (fiber)	Generally, refers to white or cream-colored paper recovered from offices, homes, schools, and other sources. Includes used copy paper, stationery, and old books.
Industrial or Manufacturing Waste	Material discarded from industrial operations or manufacturing processes. Such material can only be counted as recycled content if it would otherwise have not been recovered. This includes dry paper and paperboard waste generated after completion of the papermaking process (that is, those manufacturing operations up to and including the cutting and trimming of the paper machine reel into

	smaller rolls or rough sheets) including: envelope cuttings, bindery trimmings, and other paper and paperboard waste resulting from printing, cutting, forming, and other converting operations; bag, box, and carton manufacturing wastes; and butt rolls, mill wrappers, and rejected unused stock; and repulped finished paper and paperboard from obsolete inventories of paper and paperboard manufacturers, merchants, wholesalers, dealers, printers, converters, or others.
Mill Broke	Any paper waste generated in a paper mill prior to completion of the papermaking process. It is usually returned directly to the pulping process. Mill broke is excluded from the definition of "recovered fiber."
Molded Foam	Foam that has been cast into a particular form and allowed to expand and form its cellular, bubble-like structure. Note: all molded foams are expanded but not all expanded foams are molded, some are extruded.
Options	Items that are purchased by consumers for the purpose of upgrading their computer systems. Examples: Monitors, hard disk drives, mice, keyboards, speakers, etc. These are "in scope" for Korean markings.
Polymeric	A substance made of plastic.
Post Consumer Waste ***also described as post consumer recycled content (PCRC) when recycled into a used in a new material***	Materials which have been diverted, sorted for recycling after they have performed their designed purpose. *Example: Paper, paperboard, and fibrous materials from retail stores, office buildings, homes, and so forth, after they have passed through their end-usage as a consumer item, including: used corrugated boxes; old newspapers; old magazines; mixed waste paper; tabulating cards; and used cordage; and All paper, paperboard, and fibrous materials that enter and are collected from municipal solid waste.* Guidance: Same principles would apply to non-paper materials.
Primary Package	The first layer of packaging in contact with the part.
Recovered Fiber (paper)	Recovered fiber is the combined total of post-consumer recycled fiber and recovered manufacturing wastes that would have otherwise entered the waste stream. Guidance: Same principles would apply to non-paper materials.
Recyclable	Waste material which is capable of being processed for subsequent use. Materials are only recyclable if there is a widely available economically viable collection, processing, and marketing system for the material.
Recycled	Material which has already been reclaimed from a waste product and processed in order to regain material.
Recycling	The conversion of an item or material from its existing state for reuse as a similar or different item or material. Not to be confused with reuse (see next definition).
Recycling Rate	Recycling rate = Total recycled (by weight) divided by total discarded (by weight) + recycled (by weight).
Refillable	Similar to reusable but this term implies that it is reused for another shipment of the exact same type of product usually in a closed loop

	with the original manufacturer. Example: Beer kegs, ARBO crates.
Reusable	When applied to packaging, reusable means a container, package, or component of the container or package (e.g., a foam cushion, plastic bag, etc.) is capable of being used more than one time, without being significantly changed (i.e., used in its same physical form, requiring only minor repair or cleaning). Reusable is not to be confused with recycling (which reprocesses it back into raw materials). Reusable containers may be refilled by the original manufacturer or by another user for a similar purpose. Example: standard wooden pallets.
Rigid Plastic Packaging Container (RPPC) **http://www.calrecycle.ca.gov/plastics/rppc/**	What are rigid plastic packaging containers? Currently the California Code of Regulations (CCR) Defines RPPCs as containers that: • Are made entirely of plastic, except for lids, caps, or labels. • Have a capacity of at least 8 fluid ounces but no more than 5 gallons, or the equivalent volumes (important: this applies even if the container is not used for liquids or powders). • Can maintain their shape while holding a product. • Are capable of multiple re-closures, and are sold with an attached or unattached lid or cap. Guidance: RPPC's: Molded Clam-Shells and wafer containers are considered to be RPPC's if they meet the size criteria. Not RPPC's: Molded cushions (foam or vacuum formed) since there is no closure or lid even though they hold their shape when empty.
Secondary Material	Resultant material of a processed recyclable material.
Secondary Package	The second layer contains primary package(s).
Source Reduction	The design and manufacture of products and packaging with minimum volume of material and/or a longer useful life.
Suppliers	Organizations that provide parts, products, and components to an IBM site. This can include other IBM sites as well as independent vendors.
Tertiary Package	This includes the shipping container and all additional internal dunnage materials, if any.
Virgin Fiber	Refers to cellulose fiber derived directly from trees and other plants that is newly pulped, previously unused.

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