

SPP 72
Packaging Material and Marking Requirements



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1. Introduction

Packaging materials and markings are becoming more regulated throughout the world. Requirements exist for materials used, substances used in the making and treating of materials and how packaging materials are labeled. The marking is used during subsequent recycling, reuse, or disposal of the packaging materials.

1.1 Purpose

This document provides X-Rite’s global requirements for all packaging used for selling or shipping X-Rite products. All packaging for X-Rite products designed or tooled after the release of this document must comply.

1.2 Scope

The requirements in this document apply globally to all packaging used for selling or shipping X-Rite products. The document applies globally to all X-Rite business units and X-Rite suppliers.

In the case of a discrepancy between this document and the referenced regulations, the referenced regulations in effect at the time of application take precedence unless the requirements specified herein are stricter.

2. References

- Directive 94/62/EC on packaging waste and its amendments (European Union)
- ISPM #15: Guidelines for Regulating Wood Packaging Material in International Trade
- JIS 6899-1 (ISO 1043-1)
- National Standard of the People’s Republic of China, GB 18455:2001 (China)
- Presidential Enforcement Decree of December 18, 2002 (Korea)
- X-Rite Global Product and Component Specification for the Environment (GPCSE)

3. General Requirements

- **Restricted Materials** – Along with the information provided herein, refer to the X-Rite GPCSE for packaging material and substance restrictions.
- **Depleting Substances in Packaging Materials** - Chlorofluorocarbons (CFCs) and Hydrochlorofluorocarbons (HCFCs) listed in the X- Rite GPCSE – must not be used in plastic foam packaging materials; for example, as foaming agents. Methyl bromide sterilization must not be used on wood packaging.
- **Heavy Metals in Packaging Materials** - Packaging materials must not contain lead, mercury, cadmium, or hexavalent chromium where the sum concentration of incidental lead, mercury, cadmium, and hexavalent chromium is greater than 0.01% (100 PPM) by weight (reference EU Directive 94/62/EC and its amendments).
- **Polyvinyl Chloride (PVC)** - PVC must not be used in package designs.
- **Recyclable Materials** - All materials used in the packaging systems must be recyclable. Choose materials in which recycling systems are readily available. Do not use permanent glue or adhesives to attach dissimilar materials such as foam cushions to corrugated.
- **Material Marking** - Where the following materials are used in packaging, the applicable International Universal Recycling Code and Number is required to be embossed or marked on all components. The symbol, not including the lettering, must be between 0.5 in (1.27 cm) and 1 in (2.54 cm) in height. The symbol and the lettering must be molded or embossed into the base of a component or labeled. It must be durable, clearly visible, and easily legible when the packaging is opened. The abbreviations must appear in capital letters. Example:





Material Description	International Universal Recycling Codes and No.	
	Code	Number
Polyethylene Terephthalate	PET	1
High Density Polyethylene	HDPE	2
Polyvinyl chloride	PVC	3
Low Density Polyethylene	LDPE	4
Polypropylene	PP	5
Polystyrene	PS	6
Corrugated fiberboard	PAP	20
Non-corrugated fiberboard	PAP	21
Paper	PAP	22
Steel	FE	40
Aluminum	ALU	41
Wood	FOR	50
Cork	FOR	51
Cotton	TEX	60
Jute	TEX	61
Glass clear GL 70	GL	70
Glass green GL 71	GL	71
Glass brown GL 72	GL	72
Paper and cardboard/miscellaneous metals	*see note	80
Paper and cardboard/plastic		81
Paper and cardboard/aluminum		82
Paper and cardboard/tinplate		83
Paper/cardboard/plastic/aluminum		84
Paper and cardboard/plastic/aluminum/tinplate		85
Plastic/aluminum		90
Plastic/tinplate		91
Plastic/miscellaneous metals		92
Glass/plastic		95
Glass/aluminum		96
Glass/tinplate		97
Glass/miscellaneous metals		98

*For composites, the material abbreviation is "C/" plus the abbreviation for the predominant material; for example, C/PAP for a composite that is predominantly paper.

3.1 Country-Specific Marking

Certain countries have specific marking requirements that must be met, in addition to the international requirements previously identified.

3.1.1 China

For packaging materials used for X-Rite branded finished goods for distribution and sale in the People’s Republic of China (PRC), the requirements of GB 18455-2001(summarized in this section) must be met.

China has four different symbols as shown below. Symbol sizes are generally of 4 types; 20mm X 20mm, 40mm X 40mm, 60mm X 60mm and 80mm X 80mm. For especially large or small package component sizes, the symbol may be appropriately enlarged or reduced.

Name	Graphic
Reusable	
Recyclable/renewable	
Contains renewable materials	
Green Point Mark	

The China mark for typical packaging materials consists of the chasing arrows triangle with the appropriate China alphanumeric code centered below the arrow. (Placing the alphanumeric code inside the triangle is also acceptable.) Example:



China has its own material alphanumeric code which differs in some cases from the International Universal Recycling Codes. Use of the Chinese mark with other internationally required marks is acceptable as long as the China requirements are complied with.

Material Group	Material Description	China Alphanumeric
Plastic	High Density Polyethylene	HDPE
	Low Density Polyethylene	LDPE
	Polyvinyl chloride	PVC
	Polyester	PET
	Polypropylene	PP
	Polystyrene	PS
Paper	Paper	WPP
	Paperboard	PB
	Corrugated cardboard	CB
	Corrugated fiberboard	FB
	Non-corrugated fiberboard	NCFB
Metal	Steel	FE
	Aluminum	ALU
Composite Material	Plastic/aluminum	11
	Plastic/tin	12
	Plastic/mixed metals	13
	Plastic/glass	14
	Glass/aluminum	21
	Glass/tin	22
	Glass/mixed metals	23
	Paper or fiberboard/plastic	31
	Paper or fiberboard/aluminum	32
	Paper or fiberboard/tin	33
Paper or fiberboard/mixed metals	34	
Paper or fiberboard/plastic/metal	41	
Glass	Colorless	GL1
	Brown	GL2
	Green	GL3
Wood	Wood	NW

Plastic packaging material for China should use the chasing arrow triangle with the material number in the triangle and the plastic alphanumeric centered under the triangle as shown in this example:



3.1.2 Japan

The guidelines for Japanese material labeling requirements indicate the following major points:

- The vertical size of the marks shall be 6 mm or more for printing and 8 mm or more for embossing.
- There are exemptions for packaging that has no existing printing, is too small (less than 50 cm²), or when affixing the label is not possible due to shape.
- However, if any of these packaging components are part of a packaging system (such as the outer film with no labeling, bottle, or small cap) the exemptions do not apply. Either each component must be labeled or for packaging that is either too small or of an odd shape, the identification mark shall be placed on another packaging component in addition to its own mark.
- Marks for two or more packaging components may be placed on either component if they are to be discarded at the same time.
- Although not mandatory at this time, indication of material under the mandatory marking is preferable by using signs prescribed by JIS 6899-1 (ISO 1043-1).

Corrugated Boxes	Paper and Composite Packaging (combined kraft and paper structure)	Plastic Containers/Packaging (except PET Bottles for beverages and soy sauce)
		
PET Bottle	Steel Can	Aluminum Can
		

3.1.3 Korea

South Korea requires a Separate Discharge Mark (shown below) for containers of certain products and “buffers” for electronic equipment. The requirements of the Separate Discharge Mark System are provided in the Presidential Enforcement Decree of December 18, 2002. The Separate Discharge mark must be displayed with the general material coding mark, as shown here.



The Korean text below the triangle symbol reads “separate disposal.” Material type abbreviations (PET, HDPE, LDPE, PP, PS, PVC, OTHER, Metal, Fe, Al, Paper, Paper pack, or glass) should be indicated inside the triangle. Material types, other than plastic resins, should be written in Korean. The symbol (excluding the “separate disposal” text) must be larger than 8 mm in width and length. The height of the “separate disposal” Korean text should be one fourth of the width of the symbol. The extension of each side of the symbol is a regular triangle, whose inside angle is 60° and outside angle at the bended part of the arrow’s end is 120°. The color of the label should be distinct from other colors used on the packaging, so as to make the label clearly visible (however, this is not applicable to engraved or embossed labels).

- The label should be located on the front or side flank of the component, unless impossible, in which case the label could be located on the bottom or lid of the package.
- If there are multiple separable components, each component should bear the label
- If it is impossible to label each component, only the major component should be labeled using the symbol for its material type, together with the role/function name (in Korean characters) and abbreviation letters of the material types of the other unlabeled components, separated by a colon (:), adjacent to the symbol. This is referred to as Inclusive Marking.
- For composites, “OTHER” shall be used inside the symbol. Please note that paper-plastic composites are limited only to paper with a plastic layer or coating on both sides of the paper.

Producers and/or importers who wish to use this “separate disposal” label on packaging material that is not required to be labeled must apply for its use through ENVICO. Producers and/or importers may voluntarily label other packaging elements (such as packaging elements not required to bear the “Separate Disposal” label) with material identification, empty space ratio and number of layers.

Electronic equipment refers to products that are powered by electricity and utilize electronic motions generated using electronic tubes or semiconductors. They include industrial machinery and tools (computers, communication machinery and tools, electronic applied machinery and tools, and so forth) as well as household machinery and tools (televisions, refrigerators, washers, audios, etc.)

A "buffer" is defined as any packing materials that are made from foam-like synthetic resins, which are made of beads containing hydrocarbons such as butane, hexane, pentane, and so forth, and are puffed by applying heat or by other means. Examples of "buffer" materials are expanded polystyrene (EPS), polystyrene paper (PSP), expanded polyethylene (EPE), and expanded polypropylene (EPP).

The scope of electronic products covered by the “buffer” labeling requirement includes all end-use electronic equipment (for consumer and commercial use) but excludes parts and supplies of electronic equipment. For example, a redundant power supply or an external hard disk drive, would be covered; however packaging for internal hard disk drive and other optional internal components are exempt.

Exemptions to the separate disposal labeling requirement include the following:

- Packaging materials whose surface is less than 50 cm².
- Packaging components with a capacity or volume less than 30 grams or 30 milliliters.
- Packaging material on which it is technically difficult to print, engrave, or label due to elements or structural properties.
- Film/sheet type packaging materials that are not printed, engraved, or labeled in the process of manufacturing, use, import, and sale. (This exemption originally included all packaging materials that are not printed, engraved, or labeled in the process of manufacturing, use, import, and sale, which was referred to as “unfigured packaging material.” An amendment on Dec. 17, 2003, narrows the definition of “unfigured packaging materials” to only “film/sheet type”).
- Wrap film packaging materials with a thickness less than 20 microns (µm).

3.1.4 Taiwan

Taiwan requires the use of a four-arrow symbol on all plastic containers and plastic packaging components. In addition to the four-arrow symbol, plastic containers should also have a materials symbol.



Obligated packaging materials are:

- Aluminum
- Steel (refers to steel sheet)
- Glass
- Paper (waxed, laminated/coated with plastic, or laminated with aluminum)
- Aluminum Foil Pack (such as Tetra Pak[®], paper/aluminum foil/plastic composite)
- Plastics: PET, EPS (for disposable dishware), PS, PVC, PE, PP, or other plastics
- Plant fiber

Containers are defined as —packaging that is made from [specified] materials, is used to hold, and is not in the form of bag, film, cloth, and foil. Containers do not include those with a volume of over 17 liters (4.5 gallons). This does not apply to packaging such as cushions.

The four-arrow symbol must be marked on all subject containers and packaging sold on the Taiwan market, no matter whether they are sold to end-users or business-users. The manufacturer must label the packaging correctly and pay the corresponding fees.

3.1.5 Slovakia

Slovakia requires the use of a disposal symbol - the Tidyman symbol - which in Slovakia means "this packaging must be put in a collection bin after use" - on all commercial and retail packaging.

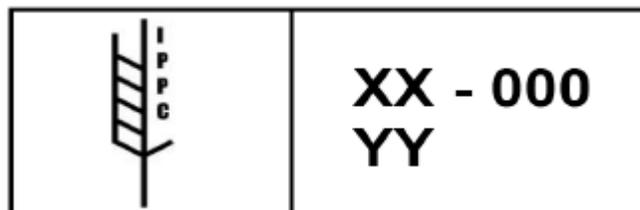


Exemptions from marking:

Packs with a surface of less than 100 cm² (15.5 in²); packs with a capacity that does not exceed 50 ml (1.7 fl oz); inner fixings, components and inner layers if these are not printed or embossed; plastic film that is not printed or that bears no label; packaging ancillaries such as labels or hang tags; and packaging components with a weight not exceeding 5 g (0.18 oz).

3.2 Packaging and Pallets Made of Wood

Within the country of origin, or where the shipping entity has specifically determined that country of destination will accept untreated pallets, all packaging and pallets made of wood must be treated and marked in accordance with the provisions of the International Standard for Phytosanitary Measures (ISPM) #15: *Guidelines for Regulating Wood Packaging Material in International Trade*.



The mark must include the following:

- IPPC symbol
- ISO two-letter country code followed by a unique number assigned by the National Plant Protection Organization (NPPO) to the producer of the wood packaging material, who is responsible for ensuring appropriate wood is used and properly mark
- The IPPC abbreviation for Heat Treatment (HT)

Note: Methyl bromide (MB) fumigation is not to be used.



Revision History

Revision	Change
A, June 18 2009	SJW - Initial release