

# Design For Recycling

## GUIDELINES for packaging

\*Polymer resin can be either fossil- or bio-based, virgin or recycled.

\*\*Temporary solution

\*\*\* Nitrocellulose (NC) based inks impact on recyclability is under investigation by RecyClass.

### Material:

- PET bottle
- PET tray
- PP rigid

### PP flexible

Transparent

- PE rigid
- PE flexible
- PS
- Paper & cardboard
- Beverage carton
- Glass
- Steel
- Aluminium



		Yes - Full compatibility	Conditional - Limited compatibility	No - Low (or no) compatibility
Main body	Material*	Oriented and non-oriented PP (including PP-plastomers)	Multilayer PP/PE with PE ≤ 10%	Any other polymer (ex. PET, PVC, etc.)
	Colours	Unpigmented; transparent	Light colours; translucent colours	Dark colours; black; carbon black
	Size	> A4 or > 50 x 50 mm once compacted	< A4 format or between 20 x 20 and 50 x 50 mm once compacted (Sorting test)	< 20 x 20 mm
	Product residues	A if the index Easy-to-empty is < 5%; B if the index is < 10%	C if the index Easy-to-empty is < 15%	D if index <20%; E < if index 25%; F if index > 25%
	Barrier	SiOx and AlOx without additional coatings	≤ 5% EVOH (in polyolefinic combination film);	> 5% EVOH (in polyolefinic combination film); Barrier layer PVC, PVDC, PA; AlOx coating with PVOH primer; any other barrier layer; metallisation; aluminium
	Additives	Aliphatic polyurethanes ≤ 2.3%; Laminating adhesives approved as fully compatible by RecyClass; To be tested if in combination with a barrier material		PBT Voiding Agent; Bio-/oxo-/photodegradable additives; foaming agents used as expandant chemical agents; Additives that do increase the density higher than 0,97 g/cm <sup>3</sup> (CaCO <sub>3</sub> , talc, glass fibers, etc.)
	Laminating adhesives	Laminating adhesives approved as fully compatible by RecyClass; To be tested if in combination with a barrier material	Aliphatic polyurethanes between 2.3% and 4.5%; Laminating adhesives approved as limited compatible by RecyClass; To be tested if in combination with a barrier material	Aliphatic polyurethanes > 4.5%; Aromatic polyurethanes; To be tested: Acrylics; Laminating adhesives specially developed for high thermal applications above boiling and/or for high chemical resistance; Any other laminating adhesives
Attachments	Closure Systems	PP	PE	Metal, aluminium, PVC, PET, PETG, PS, PLA, non PO or foams with density < 1 g/cm <sup>3</sup>
	Liners, Seals and Valves	PP	PE, removable aluminium liddings	Metal, aluminium, PVC, PET, PETG, PS, PLA, foiled paper, non PO or foams with density < 1 g/cm <sup>3</sup>
	Other Attachments	PP	PE	Metal, aluminium, PVC, PET, PETG, PS, PLA, non PO or foams with density < 1 g/cm <sup>3</sup>
Decoration	Inks***	Non-bleeding inks compliant with <a href="#">EuPIA Exclusion Policy</a>		Inks that bleed; Inks non-compliant with EuPIA Exclusion Policy
	Labels	PP	PE	Metallized labels, any other; paper labels
	Adhesives for labels	Water soluble or water-releasable at less than 40°C		Adhesives non-soluble in water or non-releasable in water at less than 40°C
	Direct Printing	Laser marked print; Printed production or expiry date	Printing covering < 50%**	Printing covering > 50%**