

# Design For Recycling

## GUIDELINES for packaging

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

### Material:

#### PET-bottles Coloured

- PET-trays
- PP rigids
- PP flexibles
- PE rigids
- PE flexibles
- PS
- Paper & cardboard
- Beverage cartons
- Glass
- Steel
- Aluminium



	Yes - Full compatibility	Conditional - Limited compatibility	No - Low (or no) compatibility	
<b>Main body</b>	Material*	PET	PLA; PVC; PS; PETG	
	Material composition	A when PET content is > 95%; B when PET content is > 90% and all packaging features are FULLY compatible with recycling	C when PET content is > 70% and all packaging features are FULLY compatible with recycling	D when PET content is > 50%; E when PET content is > 30%; F when PET content is < 30%
	Colours	Transparent light colours	Transparent dark colours	Opaque; Fluorescence; Metallic
	Size			< 4 cm (compacted); > 5 liter content
	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 Easy-to-empty is <20%; E < if index is 25%; F if index is > 25%
	Barrier	SiOx coating; Carbon plasma-coating; PTN alloy; PA-MXD6 multilayer with <6wt% PA-MXD6 and no tie layer	EVOH multilayer with <3 wt% EVOH and no tie layers; PA-MXD6 multilayer with <6wt% PA-MXD6 including tie layers; Monolayer PA-MXD6 blend; PGA multilayer	EVOH multilayer with >3wt% EVOH or with tie layers. PA-MXD6 multilayer with >6wt% PA-MXD6
	Additives		UV stabilisers; Acetaldehyde (AA) blockers; Optical brighteners; Oxygen scavengers	Bio-/oxo-/photodegradable additives; Nanocomposites
<b>Attachments</b>	Closure Systems	PE (with density <1 g/cm <sup>3</sup> ); PP (with density <1 g/cm <sup>3</sup> )	Materials and blends with density >1 g/cm <sup>3</sup> (e.g. highly filled PE, metals,...); Non-detaching or welded closures	
	Liners, Seals, Valves	PE; PE + EVA; PP; TPO (all with a density < 1 g/cm <sup>3</sup> ); TPS (with density <0.95g/cm <sup>3</sup> )	Foamed PET (with density <0.95g/cm <sup>3</sup> ); Floatable silicone (with density < 1 g/cm <sup>3</sup> )	Materials with density >1 g/cm <sup>3</sup> (e.g. PVC, silicone, metals)
	Other Components	Base cup, handles or other components which are separated by grinding and float/sink - all with density <1 g/cm <sup>3</sup> ; PET		Materials with density >1 g/cm <sup>3</sup> (e.g. metal, RFID tags); Non-detaching or welded components
<b>Decoration</b>	Inks	Non-toxic (according to EUPIA guidelines)	Inks that bleed; Toxic or hazardous inks; Metallic inks	
	Labels	in PE; PP; OPP; EPS; foamed PET (density <1 g/cm <sup>3</sup> ), with size that does not hinder the recognition of underlying PET-polymer	Lightly metallized labels; Paper labels without fiberlosses	Labels which hinder recognition of underlying PET-polymer; with density >1 g/cm <sup>3</sup> ; Metallized labels; Non-detaching or welded labels; Paper labels with fiberloss; Foamed PETG labels; PET labels with washable inks
	Adhesives for labels	Alkali/water releasable adhesive at 60-80°C without reactivation	Hot-melts; Pressure-sensitive labels	Alkali/water soluble adhesive; Alkali/water non-soluble or non-releasable adhesive at 60-80°C
	Sleeves	Sleeves in PE; PP; OPP; EPS; foamed PET; LDPET (all with density <1 g/cm <sup>3</sup> ), with a size that does not hinder* the recognition of the underlying PET-polymer	Full sleeves translucent for IR detection in PE; PP; OPP; EPS; foamed PET; LDPET; all with density <1 g/cm <sup>3</sup>	Sleeves which hinder the recognition of the underlying PET-polymer; with density >1 g/cm <sup>3</sup> (PVC; PS; PET; PETG); Foamed PETG sleeves; PET sleeves with washable inks
	Tamper Evidence Wrap	PE; PP; OPP; EPS; Foamed PET (all with density <1 g/cm <sup>3</sup> )		Materials density >1 g/cm <sup>3</sup> (metal; PVC; PS; PET; PETG); Metallised materials
	Direct Printing	Laser marked print	Printed production or expiry date	Any other direct printing