

Design For Recycling

GUIDELINES for packaging

* Polymer resin can be either fossil- or bio-based, virgin or recycled.
 ** Nitrocellulose (NC) based inks impact on recyclability is under investigation by RecyClass.
 *** Temporary Solution

The DfR guidelines for plastic packaging are 100% aligned with....
 For more info, please visit <https://recyclass.eu/>

RecyClass

CIRCPACK
 by VEOLIA

Material:

- PET bottle
- PET thermoform
- PP rigid
- PE rigid
- PE flexible
- PS
- Paper & cardboard
- Beverage carton
- Glass
- Steel
- Aluminium

PP flexible Coloured



	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	Light colours; translucent colours	NIR-detectable dark colours (Sorting test)	Non NIR-detectable dark colours
	Size	Packaging surface > 100 cm²	Packaging surface between 30 and 100 cm²	Packaging surface < 30cm²
	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 polyolefin combination film); metallisation	>5% EVOH (in polyolefin combination film); Barrier layer PVC, PVDC, PA; AlOx coating with PVOH primer ; any other barrier layer; aluminium
	Additives	Additives that do not increase the density higher than 0,97 g/cm³	PBT Voiding Agent <5%	Bio-/oxo-/photodegradable additives; Additives that do increase the density higher than 0,97 g/cm³ (CaCO₃, talc, glass fibers...)
	Laminating adhesives	Polyurethanes ≤ 3 % ; Water Based Acrylics ≤ 2.5% ; Laminating adhesives approved as fully compatible by RecyClass ; To be tested if in combination with other barrier material than metallisation	Polyurethanes between 3 and 4.5% ; Laminating adhesives approved as limited compatible by RecyClass ; To be tested if in combination with other barrier material than metallisation	Polyurethanes > 4.5% ; To be tested: Acrylics >3%; Laminating adhesives specially developed for high thermal applications above boiling and/or for high chemical resistance; Any other laminating adhesives
	Attachments	Closure Systems	PP (including PP-plastomers)	PE
Liners, Seals and Valves		PP (including PP-plastomers)	PE, removable aluminium liddings	Metal, aluminium, PVC, PET, PETG, PS, PLA, foiled paper, non PO or foams with density < 1 g/cm³
Other Components		PP (including PP-plastomers)	PE	Metal, aluminium, PVC, PET, PETG, PS, PLA, non PO or foams with density < 1 g/cm³
Decoration	Inks*	PU-based inks (with no NC); Inks & Varnish < 5% Non-bleeding inks compliant with EuPIA Exclusion Policy;	< 0.8% of NC-binders** Inks & Varnish 5 - 7 %	> 0.8% of NC-binders; Inks & varnish > 7 %; Bleeding inks; Inks non-compliant with EuPIA Exclusion Policy; PVC co- and terpolymer binders; Any other chlorinated binders
	Facestock Label Materials	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 marking with coverage < 50 %***	Laser marking with coverage > 50 % ***	