

# Design For Recycling

## GUIDELINES for packaging

### Material:

- PET bottle
- PET thermoform
- PP rigid
- PP flexible
- PE rigid
- PE flexible
- PS
- Paper & cardboard

### Beverage carton

- Glass
- Steel
- Aluminium



	Yes - Full compatibility	Conditional - Limited compatibility	No - Low (or no) compatibility
Main Material: Recyclable content	A when >95% B when >90%	C when >70%	D when >50% F (Disqualified) when <50% fibres
Colours	NIR-detectable		Non-NIR-detectable colours (e.g. carbon black)
Liners, Barriers & coatings	<ul style="list-style-type: none"> <li>- PE coating</li> <li>- Clay / pigment coating</li> <li>- Aluminium film</li> <li>- Polyamide 6 (PA 6) coextruded with PE at &lt;20% of weight of the liner and density &lt;1.0: (At least one surrounding layer must contain maleic anhydride-grafted PE as tie layer specified for PA/PE coextrusion in a ratio of <math>\geq 0.5</math> g per g PA)</li> <li>- EVOH <math>\leq 1\%</math> with any tie layer</li> <li>- EVOH <math>\leq 6.0\text{wt}\%</math> + PE-g-MAH tie layers with MAH <math>\geq 0.1\text{wt}\%</math> and EVOH:tie layers ratio <math>\leq 2</math></li> <li>- Enkase (fluorination)</li> <li>- In-Mould fluorination</li> <li>- SiOx at &lt;5wt% in the foil component</li> <li>- AlOx at &lt;5wt% in the foil component</li> <li>- Metalisation &lt;5wt% in the foil component</li> </ul>	<ul style="list-style-type: none"> <li>- EVOH &gt; 1% with any other tie layer</li> <li>- Plasma fluorination</li> <li>- PVOH</li> <li>- SiOx at &gt;5wt% in the foil component</li> <li>- AlOx at &gt;5wt% in the foil component</li> <li>- Metalisation &gt;5wt% in the foil component</li> </ul>	<ul style="list-style-type: none"> <li>PVC/PvdC</li> <li>Oxo-degradable plastics</li> <li>Wax coating</li> <li>Biodegradable polymers</li> <li>PET</li> <li>Any other barrier solution</li> </ul>
Closure system	<ul style="list-style-type: none"> <li>- Temper evident seal (which will be 100% removed by normal usage)</li> <li>- PE or PP</li> <li>- Metal or steel</li> </ul>	- Non PO-plastics (all with density > 1g/cm <sup>3</sup> )	<ul style="list-style-type: none"> <li>- PVC/PvdC</li> <li>- Silicone</li> <li>- Biodegradable polymers</li> <li>- Any other polymer with Density &lt;1 g/cm<sup>3</sup></li> </ul>
Adhesives	<ul style="list-style-type: none"> <li>Water soluble adhesive</li> <li>Hot melt adhesive (with softening temperatures &gt;68°C)</li> </ul>		<ul style="list-style-type: none"> <li>- Insoluble dispersing adhesives,</li> <li>- Latex, hotmelt and wet-strength adhesives</li> </ul>
Additives (wet strength resins)	GPAM (glyoxylated polyacrylamide)	<ul style="list-style-type: none"> <li>- PAE (PolyAmide-Epichlorohydrin)</li> <li>- Urea/Formaldehyde</li> </ul>	Others
Additives (wet end sizing)	<ul style="list-style-type: none"> <li>- AKD (Alkylketene dimers)</li> <li>- ASA (Alkenylsuccinic anhydride)</li> <li>- Rosin</li> </ul>		Others
Fillers, Additives & Agents			
Inks & Printing	<ul style="list-style-type: none"> <li>Offset print - oil-based ink (vegetable)</li> <li>Flexo - SB / Wb</li> <li>Gravure - SB / Wb</li> </ul>	<ul style="list-style-type: none"> <li>Non toxic (not listed in EUPIA exclusion policy)</li> <li>Metallized decoration</li> <li>Offset print - oil-based ink (mineral)</li> </ul>	Inks that bleed; toxic or hazardous inks (Inks that are on the EuPIA exclusion list), metal inks
Other Components	Paper straw		