

# RECYCLABILITY GUIDELINES FOR THERMOFORMED PET TRAYS

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## PACKAGING OPTIONS FOR THERMOFORMED PET TRAYS WITH BARRIER PROPERTIES ACCORDING TO THE FOOD TO BE PACKED

Level of barrier necessary for packaging	Packaged food	Material used		
		Tray base *		Tray lid **
		Multilayer PET (1)	Monolayer PET (2)	Multilayer PET (3)
High barrier	Sliced cold cuts (slightly cured, cooked) <sup>1</sup>	✓	⚠	✓
Medium - high barrier	Fresh meat <sup>2</sup>	✓	✓	✓
	Fresh meat preparations <sup>2</sup>	✓	✓	✓
	Fresh fish <sup>2</sup>	✓	✓	✓
	Ready to eat foods	✓	✓	✓
	White cheese	✓	✓	✓
	Fresh pasta	✓	✓	✓
Medium - low barrier	Cold cuts	✓	✓	✓
	Sliced cold cuts (cured, dried)	✓	✓	✓
	Sliced cheese	✓	✓	✓
	Pre-prepared fruit	✓	✓	✓
	Long-lasting pastries	✓	✓	✓

<sup>1</sup> For the packaging of food with preference consumption date from 20 days or more the use of multilayer PET with high barrier is recommended.

<sup>2</sup> When packaging is manufactured in monolayer PET more than 400 microns thickness is recommended.

✓	Option recommended as it meets food safety and conservation requirements
⚠	Possible option provided that some additional requirements are met to ensure necessary conditions of conservation (for example, with additives and/or recyclable masterbatches)

## GUIDELINES ESTABLISHED BY PLASTIC SENSE FOUNDATION TO ENSURE THERMOFORMED PET TRAYS RECYCLING

Tray base *	
Multilayer PET (1)	Monolayer PET (2)
<ul style="list-style-type: none"> <li>❶ Transparent colourless sheet made of PET/PE</li> <li>❷ No polyurethane glue should be used for bonding PET and polyolefin layers, use acrilate or acetate based adhesives instead. The adhesive should dissolve in caustic solution at 80°C.C</li> <li>❸ It must not contain materials of similar density to PET (E.g. PVC, PVDC, HIPS)</li> <li>❹ The barrier material must be laminated or incorporated to the polyolefin liner.</li> </ul>	<ul style="list-style-type: none"> <li>❶ Transparent colourless monomaterial PET sheet</li> <li>❷ Preferably, use barrier components applied on the outer surface. Never encapsulated or in a polyolefins-based masterbatch dispersed in the PET matrix, given that the mechanical and optical properties of the recycled material are reduced.</li> </ul>

Tray lid **	
Multilayer PET (3)	
Rigid lid	Flexible lid
<ul style="list-style-type: none"> <li>❶ Transparent colorless PET must prevail in rigid lid weight with a thickness of over 150 micron.</li> <li>❷ Lids made of materials with a density similar to that of the PET shall not be admitted (E.g. PVC, PVDC, HIPS) or multilayer PET lids using PU adhesives.</li> <li>❸ In case the lid must contain a polyamide (PA), PETG or EVOH layer, its thickness must be below 35 micron and it must never be adhered to the PET layer by means of a PU adhesive. It is recommended to avoid using PETG (glycol-modified PET), as it hinders tray recyclability and reduces the properties of the recycled material.</li> <li>❹ The PET of the lid must be transparent (point 1). .- Should it be necessary to add opaque elements, the ink layer must either go in a separate polyethylene/PA layer or projected in nitrocellulose-based ink. .- One option could be using a paperboard blister pack which includes all the information necessary for consumers. In this way, separation of the blister pack with inks of the transparent tray body and lid will be very easy and recyclability shall be guaranteed: the blister pack can be deposited in the blue paper and cardboard container<sup>1</sup>, whereas the transparent tray and lid can be deposited in the yellow light packaging container<sup>2</sup>.</li> <li>❺ Resealable adhesives (e.g. Copolyester, hot melt) do not show recyclability issues, as they delaminate easily.</li> </ul>	<ul style="list-style-type: none"> <li>❶ The average density of the lid as a whole must be below 1.</li> <li>❷ It is recommended to keep the lid weight to the minimum. For this purpose, biaxially oriented polypropylene (BOPP) may replace biaxially oriented PET (BOPET). In this way, the lid density can be reduced.</li> <li>❸ Instructions should be included on the package, easily visible and readable for consumers to detach (completely unstick) the flexible lid from the tray base and to deposit the tray and the flexible lid separately in the yellow light packaging container<sup>2</sup>.</li> <li>❹ Resealable adhesives (e.g. Copolyester, hot melt) do not show recyclability issues, as they delaminate easily.</li> </ul>

Other elements of the package
<ul style="list-style-type: none"> <li>❶ It must not contain materials of similar density to PET PET (E.g. PVC, PVDC, HIPS).</li> <li>❷ These elements must be attached to the package with physical means preferably, avoiding PU adhesives.</li> </ul>

<sup>1</sup> The color of the paper and cardboard waste container may differ from a country to another. In Spain, for example, it is blue.

<sup>2</sup> The color of the light packaging waste container may differ from a country to another. In Spain, for example, it is yellow.