



CASE STUDY

PLA-Premium	Technology:	Application:
W 721-F	Thermoforming	Retail-ready display for pots

“PLA-Premium shows similar thermoforming properties than PS”

ADBIOPLASTICS helped a manufacturer of thermoformed packaging to introduce more sustainable PLA based compostable packaging in its portfolio, while keeping quality performance, transparency, acceptable shrinkage and thickness variation, cycle times, and existing thermoforming line and mould.

CHALLENGE	Our customer was a manufacturer of rigid and semi-rigid plastic packaging with a production site in Spain addressing domestic markets such as: Food, Cosmetics, Hardware, Toys, Horticulture, Livestock, etc. The company’s staff was aiming at offering its portfolio of customers biobased and compostable material alternatives, given the many requests received for biodegradables and business expectations. However, they had no experience in this regard in thermoforming from PLA based bioplastic sheet.
SOLUTION	<p>The product selected by the manufacturer for trial was a PS referenced rectangle shaped retail-ready alveoli display for e.g. pots (weight 54 g, Length: 380 mm Width: 240 mm; Height 45 mm) presenting some challenge in terms of design and in terms of processing like time of cycle, temperature, etc.</p> <p>Our technical team previously reviewed the customer’s PET reference sheet and discussed with the manufacturer’s staff current PET processing conditions to align them with existing equipment possibilities. To ensure a successful trial of PLA Premium extruded sheet. PLA Premium W 721-F grade 450 microns thick sheet was suggested as the most suitable to face the challenge. Equipment could be easily fine-tuned by the customer along the trial. Immediate very good look alveoli results were confirmed on-site.</p>
RESULT	The results obtained were satisfactory, since the processing conditions are very similar to PS production, employing the same industrial line. The thermoforming time was very similar to commercial material (PS) and the finishes were very similar, as well. Only the die-cutting part was noted as a challenge due to the high stiffness of the material.
HIGHLIGHTS	<ul style="list-style-type: none"> ● No need of new investment: It can be processed on the same industrial equipment by changing processing parameters. ● Very competitive thermoforming time. It does not make a difference with PS or PET. ● The shape of the product is similar to commercial version of PS.