

CASE STUDY 9

Use of recycled polypropylene in the form of post-industrial recyclate

INITIAL SITUATION

From the business relationship with our customer, which exists since 1995 and is the market leader in the field of feed for ornamental and pond fish, a large product portfolio has developed over the years. This includes different sizes of round cans with a capacity between 85ml and 1250ml. For each of these designs, individual geometries have been developed and customer-specific needs have been considered. Specifically, it is a round can with a thread intended for a screw cap. In addition, the geometry offers the possibility of using a sealing plate.

BRANCH

Nonfood/ Pet food

STRATEGY/ CAUSE

Optimization of sustainability and conservation of resources by using recycled material

TASK

With a view to the issue of sustainability and conservation of resources, a new project to optimize the existing product range has emerged from the long-standing collaboration. The use of rPP (recycled polypropylene) is to be implemented for series articles after successful testing of the specifications and material properties. Due to the availability of rPP, the focus is on SPIES scrap material (PIR - postindustrial recycled).



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REALISATION

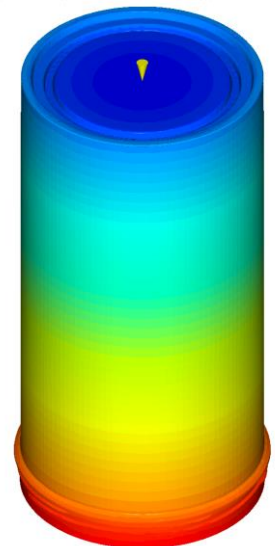
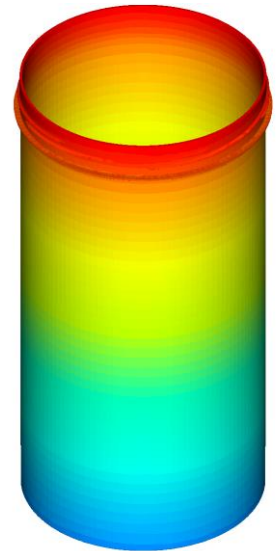
In the course of the analysis phase, the collected scrap was regranulated via a mechanical process. Subsequently, laboratory analyses of the recycled material were carried out in order to be able to define the material specification deviations. After the base material had been analyzed, sample production and migration analyses were carried out. This revealed not inconsiderable color tolerances in the rejects and the granules produced from them, and the color spectrum was further narrowed down by pre-sorting the rejects to be processed. In the final step, large-series tests were carried out at the customer's premises and passed without any deviations on the existing filling line. No significant changes in the further processing or handling of the cans, such as sealing or capping of the product, could be detected.

RESULT




The successful implementation of the project enabled the development of a circular economy of materials through the reuse of SPIES' own scrap. Shortly thereafter, the product was launched in PIR packaging for the entire European region. By reusing the material alone, a saving of approximately 50 tons of new plastic per year can be achieved. The goal is to convert our customer's entire product portfolio to PIR material.

CUSTOMER BENEFITS

In addition to the positive effects on the sustainability key figures and the company's image, the customer benefits from identical handling and smooth use in the filling line thanks to the virtually uncompromising preservation of all packaging features.



RESULT

-  **material circular economy**
-  **conservation of resources**
-  **uncompromising functionality**