

POL-ZDOB

FOUNDATION

- 30 years ago

SIZE

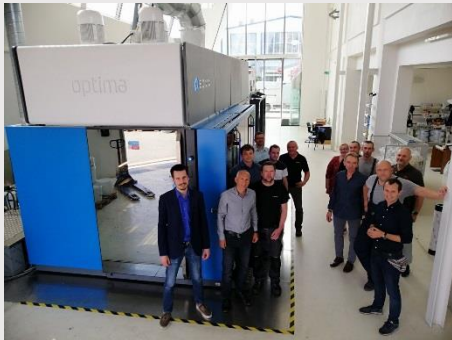
- Medium - sized

KEY PRODUCTS/ SERVICES

- semi-finished products with the end use for food
- primary and secondary packaging

KEY MATERIALS

- virgin paper
- coated paper
- plastics
- bioplastics (biobased & biodegradable)



PROFILE

The participating company is medium Polish packaging printing company established in Kraków in southern Poland. The nature of their products is semi-finished products with the end use for food (dry, wet and liquid) as well as primary and secondary packaging. The base materials are virgin paper, coated paper, and plastics, including biobased and biodegradable. The main functionalities that their end product must provide are mechanical resistance, gas and contamination barriers. The legislations that they need to comply with are EU and Polish legislations concerning food contact as well as Waste Packaging Directive 94/62/EC and REACH. The main target of product design is reducing the amount of plastic and the preferred end of life scenario is recycling. Their export share is on the level up to 20%. The company's ownership is domestic private. Revenue growth, total assets and number of employees have been increasing in the last three years steadily. Innovation is very important for the company as the ratio of innovation investment in their annual budget is more than 50%. The decision level regarding innovation processes is made on the top management level. Despite the fact, the percentage of the innovative products is less than 20%. There is a steady improvement in the number of the employees that went from 65 in 2016 to 70 in 2019. The company has ISO 9001:2015 quality certificates and FSSC 22000 food safety certificate. The company is producing food packaging for both dry and wet food with the storage time of over 6 months. The base materials of their products are virgin and coated paper, and plastics, including biodegradable and biobased plastics. POL-ZDOB is equipped with a modern machine park that enables them to perform flexographic overprints in up to 10 colors, both on paper-based and foil surfaces. They perform overprints in high definition flexo technology and flexo technology printing with low-migration UV inks and solvent inks.

SUSTAINABILITY, USING OF BIOMATERIALS

The company is printing on biodegradable and compostable foil. The main target of the product design is the easier sorting of the materials and reducing the amount of plastic. The first option regarding product end of life is recycling and the main sustainability goal is dedicated to the materials. The main technology incorporated to produce biocomposite is lamination, whereas the usage of the adhesives is the most crucial limitation in their current technology. The second limitation is flexographic printing technology. The end product is sold in rolls that are delivered to the customers.

PRODUCTION SPECIALITIES

Biocomposite is not produced by the company, they buy it as commodity product. The end-product is printed. Main function requested is grease resistance. Product design is influenced by esthetics and functionality. Regarding product end of life, their first option is landfilling followed by thermo-valorization, reuse and finally recycling.

Currently they work with flexographic printing technology with several limitations: They cannot print more than 6 colors, the width of print could be maximum 1000 cm. The thickness of paper is also critic. They use starch as adhesive and the ink is water base flexographic.



SUMMARY AND SOLUTION

In Poland, there is basically no market for biodegradable plastics. Despite numerous marketing activities, aimed at presenting the ecological advantages of bioplastics, their sales are still very modest. However, the situation is changing as more and more customers are interested in such materials. Moreover, the company is aiming to expand their market to the European countries. Therefore, they are aiming to replace paper, aluminium, and polyethylene with bioplastics with the same barrier qualities as the traditional materials. The most important material for them would be a bioplastic material for tea envelopes (packaging size 66mmx 180mm) that could be printed and still be biodegradable. The best solution would be paper coated with Ecovio, dispersion barrier, or a new Biotec material which is certified for home compost. There are other materials that can be used for their range of products, such as PLA or cellulose, and other materials produced by Futamura, e.g. Naturflex.