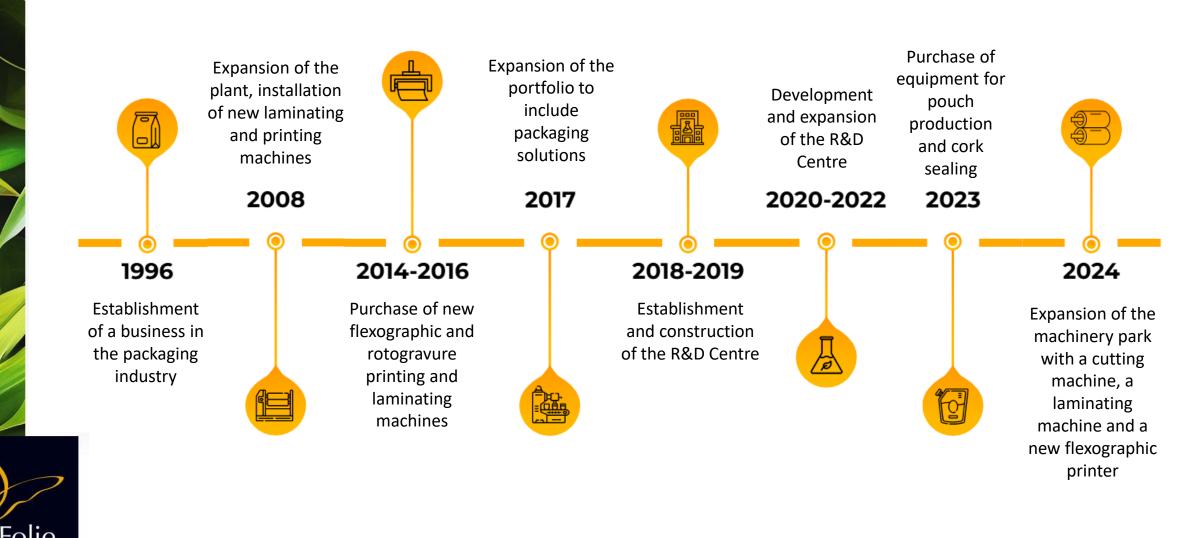




A RELIABLE BUSINESS PARTNER

Together we can change the packaging industry

HISTORY



KB FOLIE POLSKA



production

> 65 mln € revenues per year

1000 tons packaging per month

plants

almost 30 years

in a market



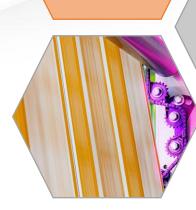
180 mln m² packaging produced per year



laminating machines

16 packaging & enhancing machines







QUALITY SIGNS

100% polish equity

Highly qualified and experienced staff

Two printing technologies: flexo, roto

In-house R&D Center Modern machine

machine park Established position in the market



System of continuous improvement





Diverse possibilities for packaging finishing







PRODUCTION





FLEXOGRAPHIC PRINTING

CAPACITIES



ROTOGRAVURE PRINTING



LAMINATION



PACKAGING / ENHANCING



QUALITY CONTROL



WAREHOUSE

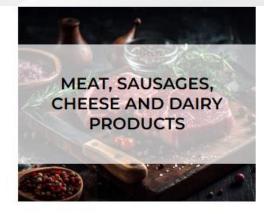




EXAMPLES OF PACKAGED PRODUCTS



















MONO-MATERIAL FILMS

- Depending on customer preferences, we offer rotogravure and flexographic printing on a variety of substrates.
- This type of packaging is mainly used for fresh food with a short shelf life, frozen food, confectionery and household chemicals.
- Mono-material films can be refined by adding coldseal coating, laser cutting, perforations, antifog coating and many other features.





LAMINATES

- We specialize in the production of **multilayer laminates** tailored to the specific characteristics of a product. By using a diverse range of materials, our laminates meet individual customer needs and expectations.
- For the packaging of demanding products such as cheese, cold cuts, fresh meat, fish or ready meals, we offer high-barrier laminates. For some solutions, we offer films with an 'easy peel' function for easier opening of the film sealed with the tray.









READY-MADE PACKAGING

- Our packaging line offers comprehensive solutions that guarantee not only safety and hygiene, but also easy transport and storage.
- The laminates can be used for packaging baby food, fruit purees and snacks or pet food.

Depending on the type of the packaged products, there is an option to incorporate a closure (standard, velcro, childproof), laser-cut notch for easy opening, a cork or simple sachets.





READY-MADE PACKAGING

- Depending on the specific nature of the packaged product, we select the appropriate four-, three- or two-layer laminates, taking into account the required thermal processing such as pasteurisation or sterilisation.
- We also produce mono-material PE/PE laminates designed for doypacks for soap and liquid detergents.







PACKAGING ENHANCING:

Laser cutting + perforations

We offer our customers the option of laser-finishing of packaging. Laser-cut notches make it easier to open the packaging, without losing the barrier properties.

In addition, perforations are used when it is necessary to drain moisture from the packaged product (for example **fresh vegetables**). Laser perforations not only improve the quality and functionality of packaging, but also make the product look more appealing on supermarket shelves and increase its market value.







ADDITIONAL SERVICES:

Cold-seal coating application

For packaging products that cannot be heat-sealed, we offer cold-seal coated laminates/foils. This solution allows for easier opening and resealing of the packaging. It is most commonly used for the packaging of chocolate, bars, chocolate-covered foods and ice cream.





ADDITIONAL SERVICES:

Barrier and sealable coatings

One of our environmentall-friendly solutions is recyclable paper packaging with sealable coating. It is an alternative to the plastic packaging, for such products as tea bags.

We also offer a range of oil-, grease- and oxygen-proof barrier papers that can be printed.

All our paper packaging solutions are recyclable, as confirmed by independent certification bodies.



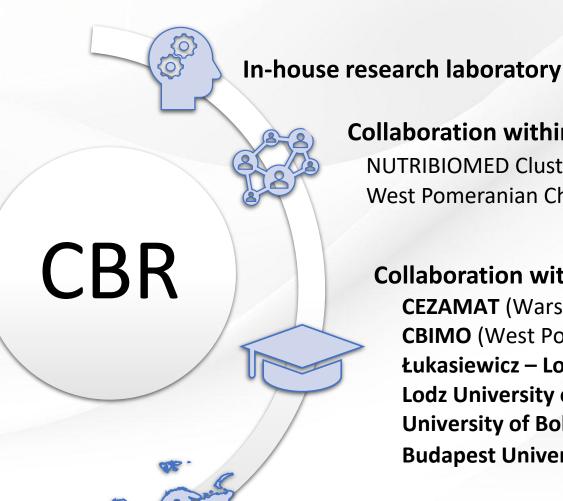




As part of the established R&D Center:

- Laboratory and office space was increased (by 900 m²);
- Warehouse space was enlarged by an additional 600 pallet spaces;
- 1,500 m² of industrial halls were inroduced for R&D and industrial testing.





Collaboration within clusters:

NUTRIBIOMED Cluster West Pomeranian Chemical Cluster "Green Chemistry"

Collaboration with academic partners:

CEZAMAT (Warsaw University of Technologies)

CBIMO (West Pomeranian University of Technology in Szczecin)

Łukasiewicz – Lodz Institute of Technology

Lodz University of Technology

University of Bologna

Budapest University of Technology and Economics

Participation in international EU projects, including: GreenMAP, REPAC², 23IND13 ScreenFood, Cornet MultireC

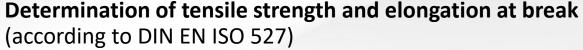


Oxygen (OTR) and water vapor (WVTR) permeability testing



Analysis of packaging structure (Raman spectrometer)

Determination of residual volatile organic compounds in films,
laminates and finished products (gas chromatography)



Determination of delamination force (according to PN-88 C-89099) **Determination of strength of hot welded joints** (Hot Tack tester) **Determination of friction force** (according to DIN EN ISO 8295)



Simulation of sterilization and pasteurization processes (autoclave, water bath)



Designing mono-material packaging with barrier properties, subjected to thermal treatment (pasteurization or sterilization)





Development of innovative composite "EkoPAK" materials, based on the guidelines and assumptions of the **circular economy and bioeconomy** for use in various industries, including the packaging industry.



Development of "ProACTIVE" packaging solutions, which improve selected parameters during transport and storage, guaranteeing the high quality of the packaged products and, in the case of foods, extending their shelf life.





Designing new smart packaging of the "SmartPAK" series, i.e., packaging that includes an interactive indicator that monitors the condition inside the package, achieved through surface printing technology.

OUR STARTEGY



Recyclable plastic packaging

Recyclable paper packaging





CIRCULAR ECONOMY



- **12.2015** Plan and strategy for plastics challenges;
- **2017** Confirmation of focus on the issue of plastic production and use: by 2030, all plastic packaging should be recyclable;
- **05.2018** Draft of the Directive of the European Parliament and the Council on reducing the environmental impact of certain plastic products;
- **06.2019** adoption of the so-called Plastics Directive.
- 12.2024 adoption of the Packaging and Packaging Waste Regulation (PPWR)

The importance of recycleabilty will increase due to the high recycling levels in the 2025-2030 timeframe, introduced by Directive (EU) 2018/852.

For plastic packaging, they are 50% in 2025 and 55% in 2030.



OUR STRATEGY

Replacement of PET/PE structure with recyclable PE/PE structure







PE/PE



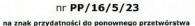


Sieć Badawcza Łukasiewicz - Łódzki Instytut Technologiczny Łukasiewicz Research Network - Łódź Institute of Technology

Dział Certyfikacji Wyrobów Papierowych i Opakowań COBRO COBRO - Paper Products and Packaging Certification Department



nr PP/16/5/23



Łukasiewicz - Łódzki Instytut Technologiczny Dział Certyfikacji Wyrobów Papierowych i Opakowań COBRO przyznaje prawo do oznaczania znakiem przydatności do ponownego przetwórstwa

następującego opakowania:

Materiał opakowaniowy i opakowania typu doypack o poj. 0,3 - 1,7 dm3 z zadrukowanego laminatu PE/PE bez bariery EVOH, z korkiem z PE

DT Producenta

1. Posiadacz certyfikatu: KB Folie Polska Sp. z o.o., ul. Bieżuńska 2b, 03-578 Warszawa KB Folie Polska Sp. z o.o., ul. Bieżuńska 2b, 03-578 Warszawa 2. Producent opakowania:

3. Opakowanie spełnia wymagania zawarte w: Kryteria Techniczne nr KT/DC/17 wyd. 9, 2023

4. Program certyfikacji:

5. Prawa i obowiazki posiadacza certyfikatu określone zostały w Umowie nr DC/2-PP/20 z dnia 2020.06.29

6. Data ważności certyfikatu: od 2023.12.04 do 2026.12.03

Dział Certyfikacji Wyrobów Papierowych KIEROWNIK

> Cosa Kopceeu dr inż. Ewa Kopania

Sieć Badawcza Łukasiewicz ódzki Instytut Technologiczny DYREKTOR

2 up. Beata Gornes dr Radosław Dziuba

Warszawa, 2023.12.04

02-942 Warszawa, ul. Konstancińska 11



Mono-material PE-based laminate

Suitable for recycling





mono-material laminate





- Outstanding puncture resistance during drop
- Exceptional tightness
- · Low sealing temperature
- Very good mechanical properties
- Fully recyclable structure

Barrier parameters:

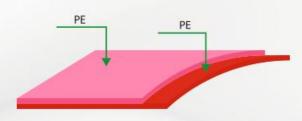
Water Vapor Transmission Rate (WVTR) < 3.0 g/m²/24 h 38°C, 90% RH

Oxygen Transmission Rate (OTR)

*possibility to add a barrier layer according to the requirements of the packaged product

Applications:

Perfect structure for doypack with spout forming. The packaging is suitable for liquid products (with volumes of even up to 2 l) e.g. liquid soaps, shampoos, shower gels and bubble baths.



OUR STRATEGY

Replacement of PET/AI/PE structure with recyclable PE/EVOH/PE structure







PE/EVOH/PE



Certificate

Made for Recycling

KB Folie Polska Sp.z o.o.

We hereby confirm the recyclability of the following packaging: PE/EVOH barrier/PE printed film

Test result

Good 16 of 20 points

Test criteria
Assignability to the collection system
Sortability of the packaging
Suitability for machanical recycling

2 of 2 6 of 6 8 of 12

Testing standard: Criteria and evaluation methodology of the bifa Umweltinstitut GmbH, tested by the Fraunhofer Institute for Process Engineering and Packaging (Fraunhofer IVV), last updated:

This certificate 1967 is valid until 13.03.2025 (two years after issue). Any change in the packaging components will render this certificate invalid. Cologne, dated 15.03.2023

Test and evaluation executed by INTERSEROH+ GmbH Evaluation methodology developed by bifa Umweltinstitut GmbH













OUR STRATEGY

Replacement of PET/PETmet/PE structure with recyclable PE/EVOH/PE structure



PE/EVOH/PE



Certificate

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Test and evaluation executed by







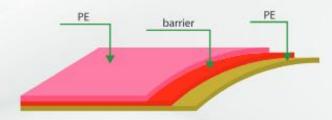




Mono-material PE-based laminate

Suitable for hot-filling Suitable for recycling





Features:

- Good barrier properties
- High flexibility
- Rotogravure and flexography printing possible
- Fully recyclable structure

Barrier parameters:

Water Vapor Transmission Rate (WVTR) < 5.0 g/m²/24 h 38°C, 90% RH Oxygen Transmission Rate (OTR) < 3.0 cm³/m²/24 h 23°C, 0% RH

Applications:

Perfect structure for spouted pouch forming. The packaging is suitable for hot-filled products (up to 85°C, e.g. fruit mousses, smoothies) or dairy products (e.g. yoghurts, creams, puddings).







www.kbfolie.pl

sales@kbfolie.pl

We are looking forward to our cooperation!

Together we can change the packaging industry