

Case Study

Beckry®Pol 2322 DA: Designed for appliances demanding superior stain and chemical resistance with exceptional flexibility.

In North America, formed cabinet wrappers for ovens required a coil coating with high chemical resistance and exceptional flexibility. **Beckry®Pol 2322 DA** was developed to meet this specific need, delivering excellent stain resistance, strong adhesion, and the flexibility necessary for complex oven components

Project background

In 2019, one of the largest home appliance OEMs in the US approached Beckers to explore switching their new oven line from powder to coil coatings. The project required finishes in a range of colors from high-gloss black and white to tinted stainless steel.

Beckers provided extensive technical support throughout the development process. This collaboration built such strong confidence that the OEM invited Beckers directly to production line trials for a separate project, bypassing the traditional lab approval stage.

The primary challenge was achieving the right balance of stain and grease resistance while maintaining exceptional flexibility critical for formed parts. After some years and multiple line and forming trials across various substrates, **Beckry®Pol 2322 DA** was officially approved, marking the success of close partnership between the coater, OEM, and Beckers.



Product specification

Beckry®Pol 2322 DA is a linear polyester coating crosslinked with amino resin, offering excellent reflectance with strong corrosion and stain resistance. When combined with Beckry®Prim 243 TU, it is especially recommended for low-heat and cold-use segments of the domestic appliance market. Its formulation, based on low molecular weight polyester, ensures exceptional flexibility without compromising performance.

Development challenge

- **Cross-Regional Coordination**

Within the Americas region, Beckers Mexico holds the majority of expertise in domestic appliance products. To meet customer specifications, the U.S. and Mexican teams closely coordinated product manufacturing in Mexico and jointly supported customer trials.

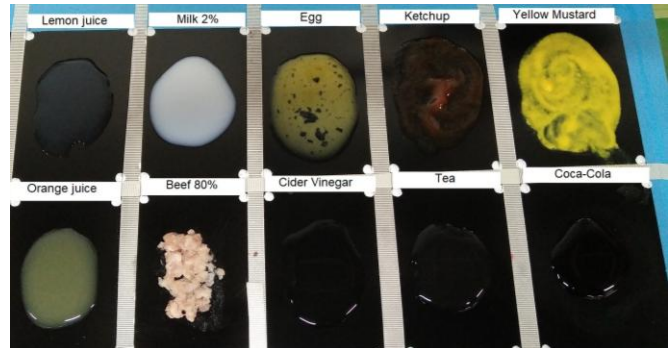
- **Substrate Variability**

Ovens are built using a range of substrates and gauges to achieve required structural integrity and weight. Our coating needed to deliver consistent color and performance across all variations.

• Application Extension

Beckry®Pol 2322 DA was originally developed for cold applications such as freezers and refrigerators, where it successfully met all performance requirements. The challenge was determining if it could perform for the hot segment applications as well.

Through close collaboration between both Beckers sites, the product was tested against low-heat specifications relevant to these applications.



Performance results

Beckry®Pol 2322 DA delivers the ideal balance of flexibility and durability, passing a series of demanding tests including:

- Food stain resistance
- Household cleaning stain resistance
- Grease resistance
- Low heat resistance
- Exceptional flexibility



Food stain testing on Beckry®Pol 2322 DA – High Gloss Black

Market impact

In the household appliance market, coatings must balance multiple physical properties. Cabinet wrappers require excellent chemical and abrasion resistance, along with outstanding formability and flexibility. Beckers offers a wide range of colors and compatibility with diverse substrates and appliance models, giving OEMs flexibility to transition from post-painting to pre-painted coil coatings. The coil coating process achieves up to 99% paint transfer to the part while providing environmental benefits over alternative coating methods.

