



INNOVATIONS

# Preform Coating System (PCS)

Collaborative development creates revolutionary answer to industry challenges.

## WHAT IT IS.

A PET preform is a test tube shaped piece of plastic made by injection molding process and is the first stage of PET bottle production. Preforms are typically produced to save the cost of shipping empty bottles, or warehousing them, as blown bottles take up significantly more space than a preform.

Lubricants are often applied to the exterior of preforms due to the handling and production challenges that come with the use of PET resin due to its high shear rate property. The Preform Coating System (PCS) was developed in close collaboration between Bonino, Chem-Trend and Steidle – all leaders in their respective industries. The system was designed to lubricate preforms right after the injection molding process, ensuring a controlled and precise coating application.

This innovative solution is installed between the injection molding machine and the Soft-Drop or Octabin's filling station, providing significant advantages over other systems that apply the coating agent while the preforms are on a conveyor or just prior to blow molding. Once the preforms enter the spraying zone in the PCS, only the body of the preform is coated. A designed safe guard in the neck section of the preform prevents the coating agent from entering the preform and causing contamination. The system was built and tested for use with Chem-Trend coating agents, specifically Lusin® Lub O 32 F, one of the most advanced and efficient coating agents available globally to ensure a uniform coating on every preform.

## WHAT IT SOLVES.

Coating application methods currently available in the market today spray the coating agent randomly, resulting in poor coverage on the preform, wasted coating agent and unwanted materials entering the preform. These methods are inefficient and create risk for the preform manufacturer and end customers. By design, the Preform Coating System addresses these core problems while providing additional benefits to preform manufacturers by helping reduce scratches, jamming, loss of bottle definition and shipping costs.

## THE IMPACT.

With the development of the Preform Coating System, Bonino, Chem-Trend and Steidle created a solution that minimized typical preform and bottle blowing headaches while also providing economic and operational benefits. This combination creates a competitive advantage for preform manufacturers. Specifically these positive impacts include:

- Reduction of risk for the preform manufacturer and end customers due to the PCS safe guard of physically preventing Lusin® Lub O 32 F from entering the preforms, along with other unwanted materials.
- Reduction of total volume of coating used per preform due to a more efficient coating process.
- Reduction of scratched preforms, and as a result, reduced number of complaints from end customers due to a more uniform coating application.
- Improved handling and positioning of the preforms when shipping due to a more uniform coating application.
- Reduced shipping expense given an average 10-15% increase in the number of preforms in any particular shipping container due to improved preform positioning.

To receive more information on the Preform Coating System, please contact us.

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