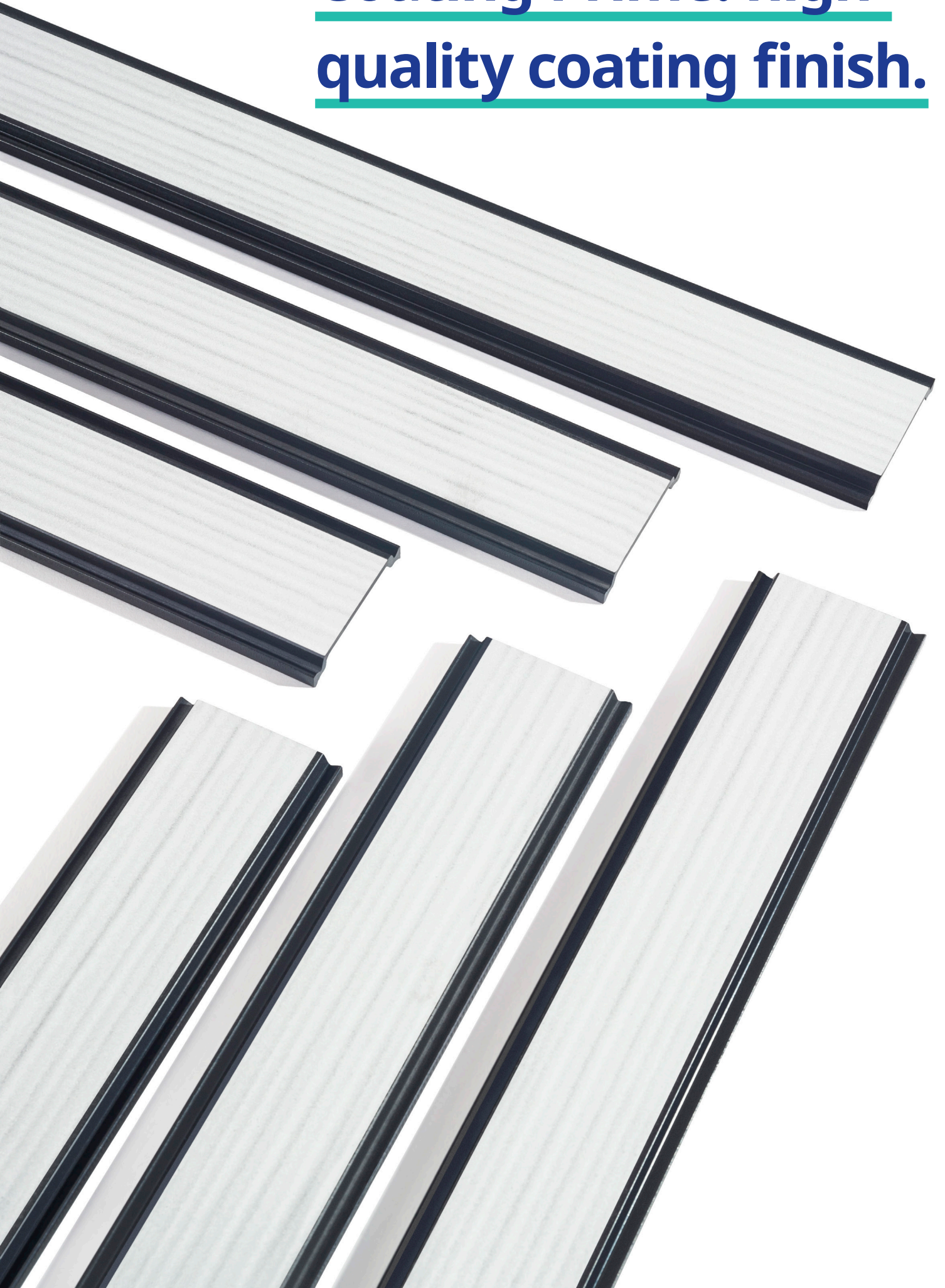


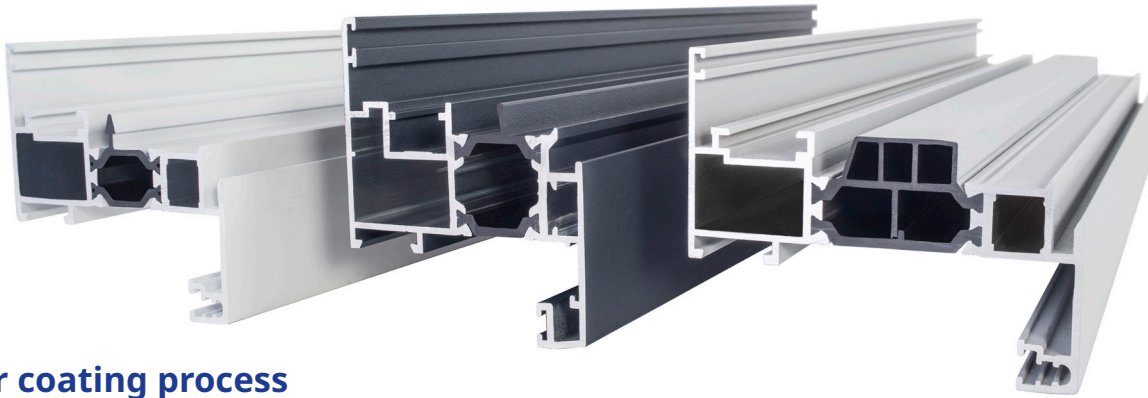
Coating Prime

A step further on polyamide powder coating on aluminum thermal break systems

Insulation solutions for windows, doors, and facades

**Coating Prime: high-
quality coating finish.**





Powder coating process

Powder coating applied to aluminum windows with thermal breaks is one of the essential processes for our customers. The electrostatic application of powder paint on aluminum offers numerous advantages, such as greater resistance to UV or corrosion, in addition to the aesthetic value.

The market is increasingly demanding more customization for which powder coating is one of the key solutions as it is possible to apply a wide range of colors and finishes to offer versatility and creativity when developing unique products.



Polyamide is an excellent component since it keeps all its properties intact after going through the standard electrical powder coating process. Thanks to its low conductivity, it is the perfect material for the thermal break in windows, doors and facades, although sometimes it can be challenging due to the electrostatic deposition of powder paint.

At Technoform, we are aware of the importance of offering an aesthetically advanced product which is why we work to develop solutions that can enhance the customer's product and adapt perfectly to their process.

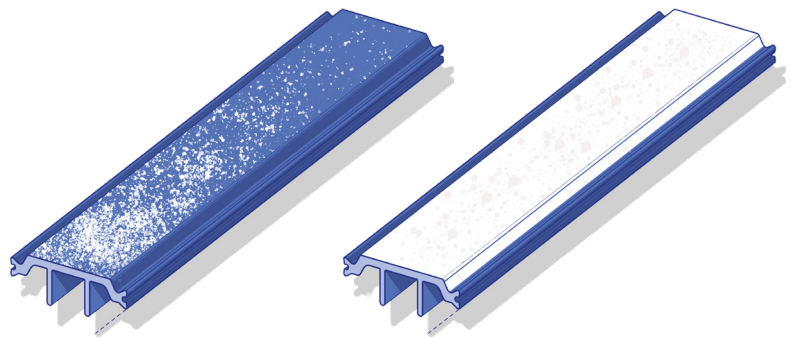
Powder coating process by electrostatic application of powder paint on aluminum profiles.

The specific details of our customers' coating processes are numerous and complex where a few key parameters (chemicals used during the pre-treatment bath, drying time, temperature) have a strong influence on the coating of the polyamide.



To achieve a good coating of polyamide, it has to be coated under specific conditions to be statically charged and under a specific framework during the coating process.

On one side, if the polyamide is coated at very low static charge, a good coverage will not be achieved. On the other side, if the polyamide is coated at a high static charge, bubbles will appear. Finding the right scale is tricky.



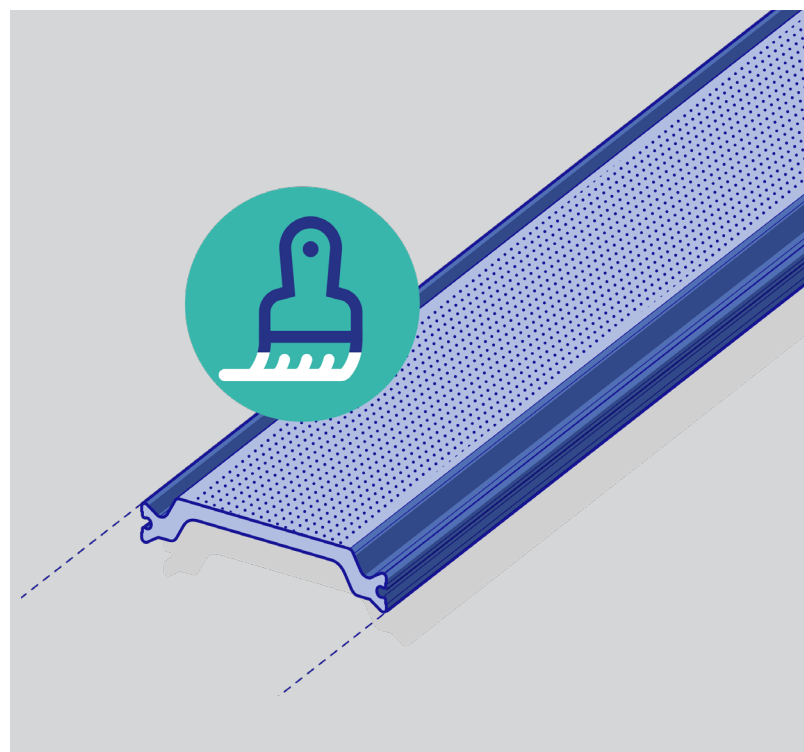
In addition, if the parameters used during the drying of the assembled profiles are outside of the polyamide coating range, the polyamide will lose too much static charge or, on the opposite, it will not be completely dry, and the static charge will be too high. As a result, the polyamide will be poorly coated.

Coating Prime solution

In view of these limitations, Technoform launches **Coating Prime** Solution on the market.

On one hand, we offer to the customer a product that allows to increase the working range of success to achieve an optimum coating of the polyamide.

Technoform also provides a complete service of advice and evaluation in the customer plant, prior to the use of Coating Prime, to define the appropriate working parameters for its use. A service that continues throughout the process of implementation of this new product in the customer's facilities and continues throughout the different orders with Coating Prime.



Coating Prime - product

Coating Prime is the new Technoform solution that increases the range of improvement of surface coating finish in polyamide following Qualicoat specifications.

Coating Prime product consists of a dispersion of particles of aluminum powder and its oxides on the polyamide surface, optimizing the deposition of the powder paint while maintaining the low thermal conductivity of the polyamide.

A solution that adapts completely to our customers coating process and allows an improvement of the coating with few adjustments and without adding extra steps in the production line.

Coating Prime benefits

Coating Prime improves paint deposition and adhesion while minimizing blistering of the applied coating thanks to the improved characteristics of the polyamide surface, which is a great improvement in this process.

Paint deposition

There may sometimes be visual differences between coated aluminum and polyamide, due to the difference in the base color of the material, especially in wider and complex geometries.

Coating Prime achieves a better deposition of the powder paint on the polyamide, coating even less visible areas, although with limitations because it is a plastic and because of the electrostatic coating process itself.

Adhesion

Coating Prime achieves a better adhesion of the powder paint to polyamide, while achieving a more homogeneous distribution of the powder.

A more uniform finish is achieved and the resistance to scratches, which may occur during transportation, manufacturing or during the lifecycle of the window, is improved.

Blistering

Minimization of blistering that may appear during the coating process, since Coating Prime make the paint adhere to the polyamide. Adhered particles prevent the evaporation of moisture.

A remarkable improvement can be observed, going from big bubbles to a slightly granulated finish.

Technoform has created an assessment and consulting methodology to provide a specific framework tailored to each customer's needs.



Coating Prime - service

To achieve an optimal coating of polyamide, Technoform has created a methodology of evaluation and assessment of the customer's coating process based on all the knowledge gained during the development of Coating Prime.

At the first stage, when a customer wants to try Coating Prime to improve the coating of polyamides, the Technoform team will carry out a complete questionnaire about the customer's process and conduct tests at the customer's facilities. The main goal is to study all the variables in order to provide a specific framework according to the customer needs and process.

In addition to the specific framework, with each new Coating Prime order customers will receive some master pieces, calibrated for that order, containing relevant information about the right time to coat those Coating Prime treated strips.

The master pieces process is simple and easy for the customer to understand:



The master pieces contain a label that indicates minimum and maximum weight ranges. The customer must only weight the master pieces corresponding to that order when coating an order of polyamides with Coating Prime. If the resulting weight is within the range marked on the label, it is the optimum time to coat. If it is not, the customer should review the framework provided by Technoform which will indicate the next steps to follow.

Coating Prime solution masters are a tool that contains relevant information about the optimal time of coating, according to each customer framework.

Evaluation and assessment methodology

To optimize the performance of Coating Prime, Technoform offers a free evaluation and assessment service to its customers. This service consists of different stages, in which the aim is to deepen the customer's process in order to offer customized solutions.

1. Survey and first feasibility analysis

Questionnaire about the customer coating procedure to obtain feedback and determine if Coating Prime is best suited for improving the customer's coating results.

Description

The survey is organized in different areas to best collect relevant information about the customer's powder coating process. Some of these areas include: system design, process management, and quality.

2. Technical visit and testing

A one-day visit to the customer's facilities by Technoform Coating Prime experts to confirm on-site the feasibility of the solution and validate the customer's specific process parameters.

This validation is performed with polyamide testers provided by Technoform. Each coating plant that the customer wants to use to coat polyamide with Coating Prime must be validated. This validation does not imply any modification to the normal operation of the plant.

3. Evaluation

Coating Prime experts will evaluate the information obtained during the technical visit.

They will analyze the results and create specific working parameters for each coating plant that has been tested.

4. First order and customer specific framework

The first regular order, which will be delivered with masters, is placed. After the first order, Technoform will deliver the specific working framework and parameters to the customer.

If there is any modification in the customer's facilities, the Technoform team will have to repeat the technical visit.

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