

Flare Illusion

Technical Brief

FLARE ILLUSION

Flare-Illusion powder coatings are formulated with Super Durable TGIC-Polyester resin systems for superior exterior durability. These products are tinted clears with pigments for special effect “ILLUSION” colors. The illusion effect seen in these special products are affected greatly by light source and positioning of the part being coated. This is, in fact, part of the uniqueness of this coating.

These specialty powder coatings are designed to be applied as topcoats to polyester base coats, preferably TGIC chemistries. The appearance of the Flare-Illusion two-coat process may vary based upon the color of the base coat and the film thickness of the Flare-Illusion topcoat. Generally, the darker the base the more dramatic the Illusion effects. Recommended film thickness for Flare-Illusion products is 2.5 to 3.0 mils. Coating thickness above 3.0 mils will reduce the clarity and might become somewhat “milky” in appearance. Since the coatings are transparent, the Flare-Illusion powder coating will not mask any defects in the base coat.

It is recommended to partially cure the base coat for better adhesion of the Flare-Illusion topcoat will bond to the first coat. Although this might not be necessary with all base coats, the procedure will help in safeguarding against poor adhesion. The cure response for Flare-Illusion is 400° F metal temperature for a dwell time of 10 minutes. Care should be taken when using low cure schedule base coats so that the first coat is not overbaked. Discoloration from over baking could be more prevalent with each additional coat of Flare-Illusion.

Since all powder coatings are made from polymeric resin systems, their insulating properties can make it difficult to apply second and third coats. Overall coating thickness therefore becomes very important. Please refer to DuPont Powder Coatings’ technical brief “Recoating or Double-Coating Over Powder Coated Parts”.

9800 Genard Rd
Houston, Tx 77041
1-800-247-3886
www.dupontpowder.com



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Flare Illusion

Optics Utilization

FLARE ILLUSION



Flare-Illusion products have been formulated in superdurable TGIC-Polyester chemistry. TGIC-Polyester powders are designed for decorative and protective end service applications where exterior durability is a requirement.

Please refer to our TECHNICAL GUIDE for additional information and properties of our TGIC-polyester products. Specific information and properties on the individual products are available on our Technical Data Sheets.

Flare-Illusion products are designed as a minimum two-coat process. A base coat, preferably high gloss polyester is applied and followed by a top coat of Flare-Illusion. Multiple coats of the Flare-Illusion products and colors may be applied to create different visual effects.

Blacks and darker colors tend to enhance the Flare-Illusion products by adding depth and richness to the color. On dark, especially black bases, the pigments reveals a distinct reflected color because most of the incident light is absorbed and only small proportion is reflected.

The wavelength of the reflected light changes continuously with the viewing angle (a phenomenon known as color flop). For instance you will see colors changing from green to blue, gold to bluish green, and copper-red to green.

The observed color is always the result of the Flare-Illusion color mixing between the base color and the reflected color of the pigments.

When the Flare-Illusion is applied to lighter base coats such as white, there is less dramatic and noticeable color changes and the overall color appears almost as pearlescent. On light colored substrates, only a slight iridescence or a reduced color effect is visible because the base reflects most of the incoming light back through the transparent pigments.

Creativeness is a must with these products and there are endless possibilities.

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