

Case Study
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ACRYLIC COATING FOR GALVANIZED STEEL

LustreLok™ – New Acrylic Coating for Galvanized Steel

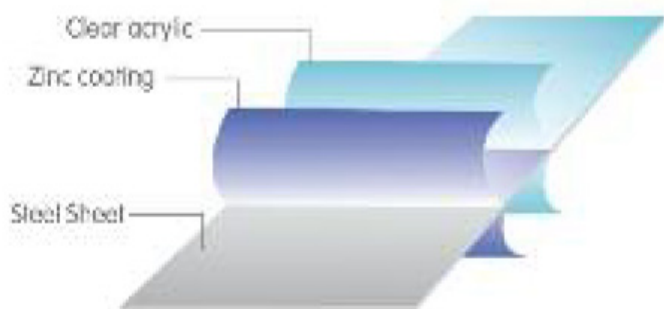
LustreLok™ is a thin, clear organic coating applied to both sides of the galvanized steel as a final protective layer over the zinc coating. LustreLok™ provides an attractive appearance and enhances the traditional look of galvanized steel. Because the resin coating is transparent, the standard surface appearance of the zinc-coated substrate is unchanged.

During our continuous hot-dip galvanizing coating process, the clear, water-based organic coating is applied to both sides of the sheet using state-of-the-art in-line reverse roll coaters. The use of reverse roll coaters provides precise application of the organic film, assuring a uniform film thickness of approximately 0.04 mils (1 micron).



The application of the organic coating – LustreLok™ – eliminates the need for ArcelorMittal to apply conventional chemical treatment and vanishing oil. Shown in this photograph is a steel floor deck.

Sheet LustreLok™ Acrylic Coated Galvanized Steel System



ASTM Steel Grades	Thickness	Width	Zinc Coating Weights
Commercial, Forming Structural & HSLA	0.25mm – 2.31mm 0.001" – 0.091"	610mm – 1,537mm 24" – 60.5"	Z001 Z600 G01 G210

The coated sheet then passes through an in-line drying oven where it is thermally cured. The transparent coating is flexible, provides excellent resistance to storage stain and has lubricating properties that provide superior roll forming characteristics. It is designed to run through roll forming operations without further lubrication and replaces the need for conventional passivation treatment and vanishing oil.

Applications

LustreLok™ acrylic coated galvanized steel is available for a wide range of applications in construction, transportation, HVAC, appliance, metal furniture and other manufactured products. If, however, colour is specified, or if a silvery metallic appearance is desired over the long term, ArcelorMittal Dofasco pre-painted galvanized steel should be used, since LustreLok™ was developed for unpainted applications.

Advantages

The application of an organic coating eliminates the need for ArcelorMittal to apply conventional chemical treatment and vanishing oil. This enhancement offers our customers and users the following benefits:

Reduced Costs

- The product is designed to be roll-formed dry, which eliminates the need for lubricants.
- Lower maintenance costs – reduced coating build-up and reduced tool wear will extend die life.
- Improved productivity – extended die life results in longer production runs.
- Enhanced scheduling flexibility – eliminates the need for die clean-up prior to roll forming pre-painted metals or other uncoiled products.
- Storage, handling and installation benefits
- Excellent resistance to staining during transit and field storage
- Reduces smudging and streaks associated with rolling oils.
- Effectively resists figure printing and foot printing during installation.

Improved Safety

- Finished product is delivered to the job site dry providing a safer, oil free surface for workers.