

Bondable Coatings



Product Description

Aleris Bondable Coating has been specially formulated to be compatible with foam, adhesives, caulking compounds, or adhesive tapes to increase the structural integrity between the coated aluminum side panel and the structural member. This product has been designed for virtually any application that requires adhesive bonding, riveting, welding or the use of mechanical fasteners in the construction of the panel or final product, resulting in optimum coating performance.



Application

Aleris Bondable Coating is coil coated onto chemically cleaned and pretreated aluminum substrate to ensure maximum adhesion and desired physical properties are achieved. Generally, the Bondable Coating is applied to the backside of the aluminum substrate. The finish topcoat color that you choose is applied on the topside of the aluminum panel.

Potential End Uses

Aleris Bondable Coating may be used for the following applications: Truck Trailer Panels, Cargo Trailers, Horse Trailers, Building Panels, Garage Door, Entry Door, Appliance (Refrigeration & Range), Automotive Trim Parts, School Buses, Window Components, and Office Furniture (File Cabinets & Wall Partitions).



Color and Gloss

Limited color shades over a full gloss range are available for Bondable Coatings, which is typically applied to the backside. As always, you can choose the topside color and gloss.

Key Features & Benefits

For most applications, it is not necessary to prepare the surface of the Aleris Bondable Coating provided that the coating is clean and free of dust or oil. An added advantage of the Bondable Coating is that it provides excellent compatibility with a wide variety of adhesives including two-part epoxy and moisture-cured isocyanate adhesives. Additionally, the Bondable Coating may be utilized as a finish coat for various interior applications.



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Technical Information

The Aleris Bondable Coating has undergone extensive testing and bonding work by several major adhesive suppliers. The adhesive suppliers performed such tests as lap shear, T-peel and side impact at -30°F . As one would expect, the results vary depending on the selected adhesive type. Acceptable performance for truck trailer applications was achieved with moisture-cure isocyanates and two component epoxies when applied per the adhesive manufacturer's guidelines. It is recommended that the fabricator work closely with the adhesive manufacturer to insure the appropriate adhesive is selected in order to achieve the performance expectations of the final product. One should also be aware that the adhesive manufacturer might require the surface, to which the Bondable Coating is to be adhered, to be prepared properly prior to applying the selected adhesive. This is critical to insure that maximum structural integrity is achieved between the two surfaces.

Contact your Aleris Sales Representative for samples that can be used for testing in your particular application.

Typical Physical Properties of the Aleris Bondable Coating

Property	Results	Test Method
60-Degree Specular Gloss	10 - 75	ASTM D-523-89
Pencil Hardness	F-2H	ASTM D-3363-74
Post Formability, 180 Bend Around 1/8 inch mandrel	Pass	ASTM D-522-88
Reverse Impact	1.5 x Metal Gauge	ASTM D-2794-90

Test results for a typical adhesive used for bonding aluminum panel to a substrate are:

Lap Shear	2000 - 2700 psi
T- Peel	20 - 25 lbf
Side Impact (-30°F)	50 - 65 in. lbs