

METALS

Source: Clad Rex



Eliminate your customer complaints with Vinyl Clad Metal

It's difficult to get repeat orders from unhappy customers complaining of surface finish defects, blemishes, and imperfections.

Does your quality department receive numerous dealer and customer complaints that your appliances or equipment cannot maintain their appearance? Does your product easily get nicked, scratched, scuffed, and stained after a few months of use? If the answer is “yes,” I’m guessing that the exterior is manufactured from pre-painted steel, post fabricated powder coat, or uncoated stainless or aluminum.

Your solution to this problem could be Vinyl Clad Metal (VCM), a very durable pre-coated metal that offers hundreds of finish options. There are many appliance manufacturers participating in several markets that are realizing the benefits of vinyl laminated metal for the exteriors, as well as interior components of their product lines.

A few examples:

A manufacturer of food tray delivery carts for hospitals and healthcare facilities received complaints that their products did not hold up to the constant bumps in the kitchen and hallways. This cart needed a stainless interior for food proximity

along with a durable exterior that would show no signs of wear and tear after constant use. To stay ahead of their competition, this company developed a cart that utilizes stainless sheet laminated with a woodgrain vinyl. The vinyl laminated stainless complies with NSF standards, is extremely durable compared to other coatings, and also provides a rich, pleasing appearance.

A company that manufactures glass door refrigerated display cases was using a pre-painted steel strip for the strike plates. Strike plates are the strips on the case that grab the magnetized rubber gaskets on the glass door for a tight seal. The painted strip would get scratched down to the bare metal after constant use in stores. The strike plates are now made with galvanized steel laminated with durable black vinyl and the scratching problem has been eliminated.

A manufacturer that produces a variety of cages and accessories for lab animals had a few issues with the enclosures that housed the air supply blowers. The painted cases would get scratched and scuffed from use and a tougher, more durable

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product was needed. Also, this electronic blower system needed to produce minimal sound around the animals. Vinyl clad metal resolved the problem as the vinyl has superior scratch resistance as well as better sound dampening qualities when compared to painted metals.

Benefits of Vinyl Clad Metal vs. Pre-painted or Powder Coated Metal

- ▶ **Durability** – VCM has 6-12 mil thick coating as opposed to 1-4 mil coating with painted metal. Extremely difficult for base metal to become exposed even after heavy abuse.
- ▶ **Consistent Coating** – Uniform thickness. No heavy or light areas from uneven paint application.
- ▶ **Sound Dampening** – VCM acts as an insulator to noise and vibration, allowing products that run quieter.
- ▶ **Finish Options** – Hundreds of vinyl films are available in colors, patterns, wood-grains, leathers, natural stones, geometrics, abstracts, and metals—a product designer's dream.
- ▶ **Formability** – VCM can be bent, hemmed, toggle-locked, punched, louvered, roll formed, waterjet, laser cut, etc. with no delamination or finish degradation. The vinyl will follow the metal.
- ▶ **Corrosion Resistant** – The non-porous surface is impervious to liquids, chemicals, body fluids, etc. In addition to steel, VCM can be laminated to aluminum or stainless, providing even more resistance to corrosion.
- ▶ **Anti-Bacterial** – Custom vinyl runs can be formulated with a biocide additive and



Medical equipment is one type of appliance that utilizes vinyl clad metal for durability and appearance. *Source: Clad Rex.*

includes test data for anti-bacterial properties. Excellent for hospital and healthcare appliances and equipment.

- ▶ **Fire Rated** – Vinyl Clad Metal carries an ASTM E-84 Class B fire rating, in addition to U.S. Coast Guard fire certification for inland and ocean vessels.
- ▶ **Less Rework** – VCM's resistance to handling defects will mitigate a vast majority of exterior surface rework—both in-house and warranty claims from your customers.
- ▶ **Supply Chain Flexibility** – Vinyl Clad Metal can be produced from one sheet to 1,000 with short delivery times. Manufacturers can realize the benefit of

less raw material inventory, shorter production runs, and quicker lead times.

Vinyl Clad Metal makes an excellent appliance product because of the superior adhesion of the film to the metal. This bond allows the VCM to be configured to any shape the metal can withstand—with no delamination or deterioration of the surface.

A strong bond is created through a hot laminating production line. The standard sized metal sheets are run through a scotchbrite process and then a high pressure wash to remove any oils or residue. The adhesive is applied with a coating head and cured in a furnace at 385 degrees F. The vinyl is applied from a roll and a quick water quench sets the glue immediately—no cure time needed.

If required, the full sheets can be sheared to produce smaller panels ready for production. If the manufacturer prefers to receive parts ready for assembly, the flat panels can be processed into semi or fully finished parts.

Rejections, returns, and reworks can cause a huge sucking sound coming off your bottom line. It is also difficult to get repeat orders from unhappy customers complaining of surface finish defects, blemishes, and imperfections. Consider Vinyl Clad Metal as a better material option for your products and keep those happy campers coming back for more. ■



Vinyl Clad Metal can be fabricated with bends, hems, slots, notches, louvers, etc. *Source: Clad Rex.*