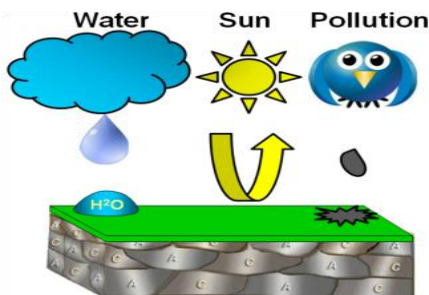


Care & Maintenance of Powder Coated Gates

Powder Coating Provides Decorative and Protective Value to Metal Products. It is no surprise that organic finishing (powder coating) of metal products that are exposed to the weathering conditions such as sun, rain, wind, pollution, freezing cold, salt water and a host of other conditions will degrade over time. The elements of nature combined with other contributing factors such as stray electrical current, dissimilar metals, and physical contact with abrasive materials may cause wear, damage, or erosion and corrosion of the coating and underlying metal substrate and will therefore shorten the decorative and protective value of the finish. In fact, it would be surprising if coatings did not degrade over time to some degree when exposed to the direct effect of Mother Nature in any climate or region.



Okay so we know about the detrimental effects of water, sun, and all types of pollution when finished parts are exposed to nature no matter how many protective layers are applied. So, what can we do to prolong the life of the finish in the field? Proper "care and maintenance" of course! The answer may seem obvious to most but surprisingly enough there are claims of warranty on products that are sold every day that proclaim that the finish requires absolutely no maintenance whatsoever. To those finishing professionals and organic chemistry experts this unrealistic expectation sounds preposterous. Indeed, it is absurd to think that any organic coating could be 100% maintenance free and not lose some or all of the original decorative and protective properties over time when exposed to the effects of weather. It is likely that you have experience at some point in your life the detrimental effects of ultra violet light (sun) exposure on your unprotected skin (sunburn). Typically, it only takes a few minutes to an hour for us to realize that the sun is harmful to our skin. It is equally likely that you have seen what the sun can do to the paint on your car or truck if the finish is not regularly cared for and the vehicle is left unprotected for extended periods of time (chalking, erosion, corrosion). To that end, it should be evident that proper care and maintenance is essential to prolong the service life of any surface that we value.



Water & Sun Exposure

In the outdoor environment water and ultra violet light exposure are the two factors that are most detrimental to any coated surface. The amount exposure to ultra violet rays from the sun is somewhat predictable at a given location. Water exposure on the other hand may be less predictable. The frequency of condensation from fog, humidity, and rain are natural sources of water exposure but some coated items may be exposed to excessive water exposure from manmade sources. Irrigation sprinklers may expose coated fences, gates, or handrail systems to water several times per day. Lawn and poolside furniture may also be exposed to more frequent water exposure including chlorine chemicals or salt water. The effort to maintain the protective and decorative value of a finish is proportionate to the exposure of these and other conditions including contact with harsh solvents or cleaning chemicals and abrasives.

Care and Maintenance of Powder Coated Surfaces

There is a great diversity of opinions about how powder coated finished products should be cleaned and maintained. With proper maintenance, one can substantially prolong the service life of the finish on their powder coated products. Using these care and maintenance tips can also reduce repair and replacement costs for some items.

Taking care of the powder coated finish

Powder coating is not impervious to harsh solvents and many commercial cleaning solutions will damage these finishes. This damage accelerates staining, fading and ultimate failure of the powder coated finish. Cleaning with such chemicals can cut the life expectancy of the finish in half. The service life of any organic finish is impossible to predict due to the many variables that influence the coatings ability to decorate and protect. Therefore, no finishing professional would ever attempt to definitively quantify how long a finish will last or at what rate the coating will begin to lose its decorative or protective value, or at what rate the values are lost. We do know however, that proper cleaning and maintenance may more than double or triple the coatings effective service life. Fabricated products that require the greatest decorative and protective value will require some sort of proactive maintenance and care. For high visibility projects such as architectural building applications it is wise to document and maintain records of the maintenance including the exact cleaning procedure, materials and frequency. These records may become useful in the event the finish fails to perform as expected.

Clean with mild soap and warm water

Products that have been powder coated should be cleaned with a soft brush or cloth, using mild soap and very warm water. Soaps that have emulsifiers that break down common stains and are scum free are the best to use. The exposed surfaces of powder coated products that are most critical should be cleaned weekly or bi-weekly for products such as automotive roof racks, trailer or motorcycle fenders and such. Simply wipe down the top surfaces and rinse with filtered water (not hard water). (Reference AAMA 610)



Commercial Cleaning Solutions

It is a common misconception that solvents, and other petroleum-based chemicals, are good cleaners for powder coated surfaces. Not true. These chemicals can be very detrimental to the organic polymer-based finish. They may clean well for a time, but they clean by removing micro layers of the finish. After a while, it becomes impossible to clean the surface using this method. Additionally, the coating surface may become stiff and hard, and lose its barrier protective value. Compounding this problem, the coating may begin to crack and prematurely lose gloss and fade the colour. Physical aging of organic coated surfaces that are constantly exposed to weathering conditions is an inescapable process that is accelerated by the use of harsh chemicals.



Wax the Exposed Surface

Just as your car benefits from semi-annual applications of wax, so will the finished surfaces of products such as outdoor furniture, security gates, outdoor lighting fixtures, stairways, handrails, guardrails, and fences. Lightly wax the coated surfaces with a high grade, non-abrasive car wax that contain U.V blocker and/or U.V inhibitors. Do not use compound waxes that contain abrasives and be sure to wipe off any residual wax. Wax that may remain on the coated surface could bake on in the ultra violet light from the heat of the sun and cause permanent staining.

Conclusion

From the moment the powder coating material is cured to the surface of the metal product the coating is exposed to conditions that may be detrimental to the decorative and protective attributes of the finish. Handling, packaging, transportation, assembly, and installation are all consideration worthy of special attention by project planners and everyone in the supply chain. Be mindful of the fact that there are many contributing factors that can and will affect the service life of any organic finish.