THERMOSET POWDER COATINGS

CARE & MAINTENANCE

Thermoset powder coatings are highly regarded for their strength, corrosion resistance, and bright finishes. To preserve their longevity and visual appeal, consistent care and maintenance are crucial. Here's a detailed guide on effectively caring for and maintaining thermoset powders and coated surfaces.

For more specific information, please refer to your Technical Data Sheet.

PROTECH GROUP

STORAGE & SHELF LIFE

The storage and handling of powder coatings, pre-cure, is critical and simple but still requires some guidelines. Here are recommendations to follow during the storing process for optimum quality and performance.

Shelf Life and Rotation

Powder coatings generally have a shelf life of 6 to 12 months, depending on their formulation. It's important to adopt a first-in, first-out (FIFO) inventory system. After 12 months of storage, the powder should be assessed by the quality control lab.

Avoid Contamination

To maintain quality, store powder coatings away from direct sunlight, heat, and contaminants such as powder spray booths, dust, or dirt. Always ensure that containers are tightly sealed before and after use. Ideally, store them off the floor on pallets to prevent moisture absorption, which can compromise the powder's quality.

Sensitive Powders

Wrinkles, Heliocoats, low-temperature, and fast cure coatings are particularly vulnerable to heat and moisture, and can be adversely affected in a shorter time if not stored under the recommended conditions.

Temperature and Humidity Control

To maintain the quality of powder coatings, store them in a cool, dry, and well-ventilated space, ideally between 15°C and 25°C (59°F to 77°F), with relative humidity below 60%. This environment helps ensure that the powder remains free-flowing. Excessive heat or moisture can lead to clumping, degradation, or a shortened shelf life, which may impact application performance.

Transportation

When transporting, ensure proper logistics by avoiding excessive stacking of containers in transport vehicles.

Stabilization

Before application, allow a few powder containers to acclimate in the application room for several hours if there is a significant temperature difference (± 20°F / ± 10°C) between the application area and the warehouse.

SECTION 2

MAINTENANCE

Powder coating provides both protection and aesthetic charm; however, it necessitates regular maintenance to preserve its qualities. If not cleaned properly, accumulation can result in problems like corrosion, dullness, staining, or chalking. The cleaning frequency should be tailored to the specific location and environmental elements, such as pollution, debris, and nearby structures. A personalized cleaning strategy is crucial for ensuring longevity. Some of the influencing factors that can affect the lifespan of Protech Group thermoset powder coatings include:

– Geographic location: Coastal, Desert, or Tropical environments
– Exposure to UV rays from sunlight
– Surrounding environmental conditions
– Levels of atmospheric pollution, including salts, dirt, and grime
– Presence of airborne debris, such as sand, which can erode the coating

Use the following table to identify recommended minimum maintenance schedule for your coated parts:

Environment	Conditions	Corrosive Zone	Example Environment	Recommended Minimum Cleaning
EXTERIOR	Mild	Low	Light	Every 12months
		Medium	Arid Urban Area	Every 6 months
	Severe	High	Sea Shore (calm)	Every 6 months
		Very High (Industrial)	Heavy Industrial	Every 3 months
		Very High (Marine)	Sea Short (rough)	Every 3 months
	Tropical	Tropical	Humid	Every 3 months
INTERIOR	General	Very Low	Dry	Every 12 months
		Low	Minor	Every 12 months
	Moderate	Medium	Condensation	Every 6 months
		High	High Moisture	Every 3 months

SECTION 3

CLEANING

All coated surfaces should be washed with clean water and a mild detergent at the recommended frequency based on your geographical location.

DOs

Clean in mild conditions

For optimal results, it is best to clean when temperatures are at or below 25°C (77°F) using gentle cleaning agents.

Use fresh, clean water

Clean surfaces with fresh water to eliminate grit and loose debris.

Remove unwanted paint & sealants

Remove paint splatters or any excess sealant before they have a chance to dry.

Use recommended solvents for stubborn stains only

Only use Isopropyl alcohol (IPA) or methylated spirits, and rinse thoroughly with clean, fresh water.
Utilize non-abrasive cleaning brushes, microfiber cloths, or sponges, and employ high-pressure washers at their lowest setting.

Damage Repair

Utilize Protech's Touch-up pens to seal minor damaged coated areas that may occur during transportation, installation, or other sources. This will help safeguard the substrate from early rust and delamination.

DON'Ts

Use abrasive materials or excessive force

Gently clean with a soft cloth or sponge, applying minimal pressure to safeguard the coating. Do not rub powder coated surfaces excessively, especially metallic finishes when cleaning.

Allow detergent to sit for too long

To achieve optimal cleaning results while protecting the coating, reduce the contact time with the detergent.

Use harsh acidic or alkaline cleaners

Powerful pH cleaners can damage the coating and should be avoided.

Ignore recommended maintenance schedules

Consistent maintenance is necessary to adhere to Protech Group Warranties and ensure the integrity of the coating.

ASKING AN EXPERT

Our coating experts can help simplify the process, saving you time and money by providing the right coating advice for your product or project.

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