

Cleaning Coil and Extrusion Coatings

Coil & Extrusion Coatings present a relatively non-adherent, inert surface to airborne soil. If needed, a variety of methods for removal of surface deposits is available. However, note these precautions:

- Do not use wire brushes, steel wool, sandpaper, abrasives or other similar cleaning tools which will mechanically abrade the coating surface.
- Some of the cleaning agents listed below should be tested in an inconspicuous area before use on a large scale. Always test a small area first.

Hot or Cold Detergent Solutions

A 5% solution in water of commonly used commercial and industrial detergents will not have any deleterious effect on a Coil or Extrusion surface. Dawn or Simple Green cleaners would be our first recommendations. These solutions should be followed by an adequate rinse of water. Use cloth, sponges or a soft bristle brush for application. Cleaning should be done on the shaded side of the building or, ideally, on a mild, cloudy day.

Solvents

Most organic solvents are flammable and/or toxic, and must be handled accordingly. Keep away from open flames, sparks and electric motors. Use adequate ventilation, protective clothing and goggles. Remove non-water soluble deposits (tar, grease, oil paint, graffiti, etc.) from Coil & Extrusion surfaces using these solvents with caution:

Alcohols

-Dilute with at least 15% water

- Denatured alcohol (ethanol)
- Isopropyl (rubbing) alcohol
- Methanol (wood alcohol)

Petroleum Solvents

- VM&P naphtha
- Mineral spirits

Aromatic Solvents

- Xylol (xylene)

- Toluol (toluene)
(These solvents should be used with caution on a Coil & Extrusion surfaces. Limit contact to five minutes. Test a small area first.)
- Ketones, Esters, Lacquer Thinner, Methyl ethyl ketone (MEK), Methyl isobutyl ketone (MIBK)
(These are extremely strong solvents and should be used with caution. If used improperly these can dull or remove the paint finish)
- Acetone/Paint Remover
Acetone can be used with care on properly cured Duracron acrylic coatings.

Chemical Solutions

- Sodium hypochlorite solution (laundry bleach, Clorox)
- Hydrochloric acid (muriatic acid)
- Oxalic acid
- Acetic acid (vinegar)

Hydrochloric acid (10% muriatic acid), diluted with ten volumes of water, may assist in removing rust or alkali mortar stains from Coil & Extrusion surfaces. Limit contact to five minutes. Caution: Acid solutions are corrosive and toxic. Flush all surfaces with water after use. Oxalic acid solutions or acetic acid (vinegar) may be used for the same purpose. Flush with water after use. Laundry bleach may assist in removing certain stains.

Mildew Removal

Remove mildew with a basic solution of the following:

- 1/3 cup detergent (Tide, for example)
- 2/3 cup trisodium phosphate (Soilex, for example)
- 1 quart sodium hypochloride, 5% solution (Clorox, for example)

Rinse with clear water immediately.

Excess Sealant Removal

Precautions should be taken to prevent sealants from getting on the painted surface. Sealants may be very difficult to remove. If any does get on a Coil or Extrusion surface, it should be removed promptly with a solvent such as alcohol or a naphtha type. Caution: It may be possible for solvents to extract materials from sealants which could stain the painted surface or could prove harmful to sealants; therefore, these possible effects must be considered. Test a small area first.

Automated Pressure Washing

To secure the expected service life of the architectural panel system the following cleaning regime is recommended. This is based on procedures and equipment typically used for cleaning tunnels.

- The Operator should formulate a regular cleaning plan and adhere to it.
- The CA requires a monthly cleaning to be performed of the wash zone, **the panel wall system** [if a different frequency is recommended then propose]
- Equipment adapted to tunnel cleaning is recommended, [e.g. a truck fitted with the following:
 - a water supply;
 - detergent supply and dosing system;
 - low pressure and high pressure pump systems;
 - a boom mounted spray unit to apply the water / detergent solution and separate rinse water;
 - ideally detergent should be applied at the front of the truck so the detergent has a short time to act prior the cleaning water is applied
 - a separate single spray attached to a hose reel should be provided to treat specific locations as needed
 - A solution of 3% mild detergent and 97% clean water is sprayed using water jet with soft chemical tip of minimum 15 degrees applied at about 3ft (1m) distance from the panel at pressures between 1500 psi to 3500psi (100 to 240bar) and a flow of 3 to 5gpm to ensure any contaminants are washed down to the barrier. The vehicle travels along the area being cleaned at about 3mph.
 - The cleaning process is repeated as necessary according the degree of soiling; generally three passes should be sufficient. The final pass is with water without the detergent applied at between 1000 to 1500psi (70 to 100bar) to rinse off the coating.
 - control system to maintain a minimum distance of the spray unit from the panel surface (e.g. ultrasonic based);
 - interlink to shut off the spray unit while the vehicle is stopped for more than 10 seconds]
- After cleaning it is recommended to perform a Routine Inspection to identify if any defects exist. As part of this Routine Inspection the following is recommended:
 - the drain channel under the panels on both sides should be checked to ensure it is free flowing and that no debris are accumulating in the gap between the bottom of the fire protection and the drain channel.