Interpon®
POWDER COATINGS
Architectural

Guidance Note 6

Cleaning and Maintenance of Powder Coated Architectural Components



1. Introduction

Maintaining the integrity of your powder coated products is just like caring for your car – and is a smart way to protect your investment. Over time with exposure to the elements, powder coatings may show signs of weathering such as loss of gloss, chalking and slight colour change. A simple regular clean will minimize the effects of weathering and will remove dirt, grime and other build-up detrimental to all powder coatings.

For any particular region or territory, there may be local regulations or local requirements to be met in order to achieve conformance to certain published quality labels or standards. It is the users' responsibility to be aware of such standards.

Records of all cleaning schedules and frequencies shall be kept and maintained and made available to AkzoNobel if requested. **Failure to comply with the recommended cleaning schedule will nullify any warranties.**

2. Cleaning of coated surfaces

Cleaning should start at the time the products are installed, ensuring that construction materials such as concrete, plaster and paint splashes are removed before they have a chance to dry. Failure to remove these materials at this early stage will require the use of aggressive cleaning materials and techniques with potential damage to the powder coated surface.

2.1 Cleaning Method:

The best method of cleaning of Interpon D products is by regular washing of the coating using a solution of warm water and non-abrasive, pH neutral detergent solution. Surfaces should be thoroughly rinsed after cleaning to remove all residues. All surfaces should be cleaned using a soft cloth or sponge or nothing harsher than a soft natural bristle brush. Cleaning of powder coated sections can be conveniently carried out at the same time as window cleaning.

If the project is subject to any hazardous unusual environmental factors, or is close to salt water, an estuary or marine environments then Akzo Nobel must be consulted on an individual project basis.

Renovation can be required in the case of heavy soiling (due to lack of maintenance). It is then recommended to consult a specialized company.

2.2 Cleaning Products:

Before cleaning, attention must, without exception be paid to the cleaning agent's datasheet.
The following guideline from GRM in Germany is also very useful and informative:
http://grm-online.de/fileadmin/user_upload/pdf/Neue_GPB/GPB_632_DB_Englisch.pdf

Usual maintenance can be done using water with mild detergent (pH 5 to 8). If the atmospheric pollution has resulted in heavy soiling of the coating, some stains or marks may require stronger domestic products. In such cases, they should always be diluted, and small inconspicuous test areas cleaned first.

In no circumstance should any abrasive cleaner or polish, or any cleaner containing ketones, esters be used.

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3. Cleaning Frequency

The frequency of such cleaning will depend on many factors including:

- The geographical location of the building
- The environment surrounding the building, i.e., marine, swimming pool, industrial, or a combination of these environments
- Levels of atmospheric pollution
- Prevailing wind
- Protection of the building by other buildings
- Possibility of airborne debris (e.g., sand/dust etc.) causing erosive wear of the coating
- If the environmental circumstances change during the lifetime of the building (e.g., rural becomes industrial)

The powder coating chemistry, for example:

- Standard polyester (Interpon D1000 type) – most regular cleaning
- Superdurable polyester (Interpon D2000 type) - medium frequency cleaning
- Fluoropolymers (PVDF or Interpon D3000 type) – longest cleaning intervals

The frequency of cleaning depends in part on the standard of appearance that is required and also the requirements to remove deposits, which could, during prolonged contact with either the powder film or the metal substrate, (if exposed) cause damage.

Sheltered areas can be more at risk of coating degradation than exposed areas. This is because wind-blown salt and other pollutants may adhere to the surface and will not be cleaned away with rainfall. These areas should be inspected and cleaned if necessary on a more regular basis.

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The Akzo Nobel cleaning frequency specifications are shown on the next page:

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4. Recommended Cleaning Frequencies

Climate		Temperate and Arid			Tropical		
Environment – EN ISO 12944-2:2018		**D1000 series**	**D2000 series**	**D3000 series**	**D1000 series**	**D2000 series**	**D3000 series**
Medium – C3 Inland		12 months	18 months	24 months	9 months	15 months	18 months
High – C4 Industrial areas and coastal areas with moderate salinity	2000 to 5000m from coastline	12 months	18 months	24 months	9 months	15 months	18 months
	500 to 2000m from coastline	6 months	9 months	12 months	6 months	6 months	9 months
	50 to 500m from coastline	3 months	6 months	9 months	3 months	3 months	3 months
	Less than 50 m from coastline	Such proximity of a building is not recommended. Further information about warranty and technical advice should be sought from AkzoNobel					
Very High- C5 Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity	2000 to 5000m from coastline	12 months	18 months	24 months	9 months	15 months	18 months
	500 to 2000m from coastline	6 months	9 months	12 months	6 months	6 months	9 months
	50 to 500m from coastline	3 months	6 months	9 months	3 months	3 months	3 months
	Less than 50 m from coastline	Such proximity of a building is not recommended. Further information about warranty and technical advice should be sought from AkzoNobel.					
Swimming Pool	Greater than 2m from edge of pool	3 months					
	2m from edge of pool	Such proximity of a building is not recommended. Further information about warranty and technical advice should be sought from AkzoNobel.					

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Type of Climate	Temperature Range	Highest Temperature with RH≥95%
Temperature	-33ºC to 35ºC(-27.4 to 95ºF)	25ºC(77ºF)
Arid Warm Arid Extremely Warm Arid	 -20ºC to 40ºC (-4 to 104ºF) 3ºC to 55ºC (37.4 to 131ºF)	 27ºC (80.6ºF) 28ºC (82.4ºF)
Tropical	5ºC to 40ºC (41 to 104ºF)	33ºC (91.4ºF)

For more detailed definitions of environment and climate, please refer to ISO9223 and EN ISO 12944:2018

5. Cleaning of Brick and Concrete

Chemical Cleaners:

The cleaning solutions used on both brick and concrete contain strong chemicals that can cause damage to the powder- coated surface. All exposed powder-coated surfaces should be fully protected.

If any such solutions or chemicals are in contact with the powder-coated surface, wash immediately with copious amounts of water.

Prolonged exposure can cause discoloration of the film, loss of gloss and damage to the coating surface.

Abrasive Blasting:

The cleaning of concrete or brick by using abrasive shot blasting must be carried out in such a way that all structures coated with powder coating must be fully protected. The abrasive medium will strip the powder coating from the metal substrate.

Only protective tape with a low tack and approved by the suppliers of the protective tape for use on Powder Coatings should be used.

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6. Protection of Coated Parts During Handling, Installation & Construction

Low tack tapes are usually applied to the coated surface during fabrication. Clear tapes should be removed after a period not exceeding three months. If further protection is required new tape should be applied. Tape should be applied and removed as recommended by the tape supplier. Any residue from the tape should be removed as soon as possible.

Do not use scrapers, abrasive paper or similar items to clean the area as this may damage the surface of the powder coating.

Water and a small amount of mild detergent may be used to clean the surface of the powder coating. Where it is absolutely necessary a small amount of white spirit may be used followed by cleaning with water and mild detergent.

Do not under any circumstances use strong solvents or solutions containing:

- Chlorinated Hydrocarbons
- Esters
- Ketones
- Abrasive cleaner or polish

Plastic Wrapping

Coated parts are often shrink-wrapped in plastic to prevent weather or mechanical damage during transport and storage. The atmosphere within the packaging naturally contains moisture reflecting the humidity levels prevalent at the time of packing. If the wrapped parts are kept outside in sunlight, rapid temperature build-up can occur resulting in a softening of the coating film and potential for ingress by moisture, creating a whitening effect of the blanching. This can be reversed on further heating of the part but is best avoided by storing parts out of direct sunlight

Handling & Protection Before Installation

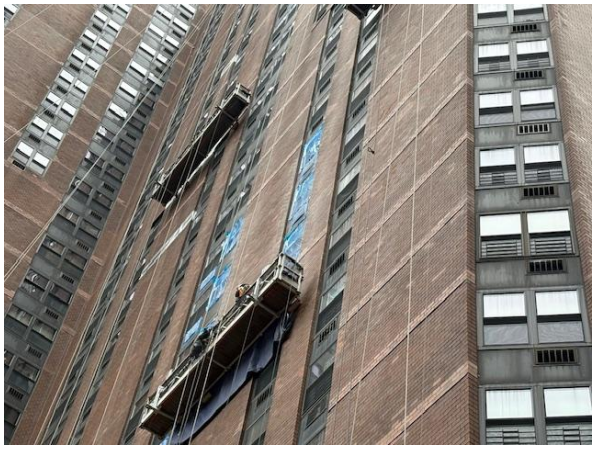
- Use protective films (low-tack tapes) until the last possible moment. Keep profiles wrapped or protected with low-tack tape/film, foam separators, or edge guards to avoid scratches (during handling, installation and transportation).
- Low-density polyethylene (LDPE) film with a pressure-sensitive acrylic adhesive.
- It will prevent scratches, scuffs, and dirt on the coated surface. It has a thickness of 40–80 µm, 3 to 6 months outdoor stability (UV resistance) and it is the most critical protection layer.
- Insert foam spacers (EPE), paper or nylon interleaving in sheets or sleeves between profiles for wrapping and bundle protection. It absorbs shocks and vibration during transport, it will prevent profile-to-profile abrasion.
- Wrap bundle in bubble wrap or foam-laminated film. Typically used for long-distance shipping/export packing. Provides extra cushioning against impact.
- Stretch film (LDPE stretch wrap) holds bundles tightly together. It protects from dust, moisture, and handling damage. Often applied after foam wrapping. When extra protection for moisture is needed, especially for long shipments, desiccant bags inside the wrapping may be used.
- Avoid storing parts wrapped with plastic film/foils in hot and/or humid environment to produce micro-climate that trigger strong blanching reaction of film.
- Use soft gloves to avoid fingerprints, abrasion or contamination.
- Avoid storing parts wrapped with plastic film/foils in hot and/or humid environment to produce micro-climate that trigger strong blanching reaction of film.

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- Avoid dragging profiles on hard surfaces and lift instead of sliding to prevent coating damage.
- For Mechanical separation and structural protection the following are typically used:
    - Cardboard edge protectors / honeycomb board. They prevent corner crushing and strap marks and distributes the pressure from strapping bands.
    - Plastic or foam spacers. Keep profiles separated inside bundles and avoids rubbing of sharp edges.
    - Timber or plastic pallets/crates. They ensure stable stacking and proper forklift handling.
- Secure with PET/PP straps. Secure bundles to pallets.

To avoid mechanical damage during installation

- On the construction site and during construction, the coated aluminium should be protected from damage caused by abrasion and construction materials, such as paint, mortar, cleaning chemicals etc.
- If such materials have been in contact with the coated surface, they should be cleaned immediately before they have dried. Failure to remove these materials at this early stage will require the use of aggressive cleaning materials and techniques that may result in damage to the coated surface.
- Use non-marring tools (rubber mallets, nylon shims, plastic wedges)
- Prevent direct contact with sharp objects (clamps, chisels, metal edges)
- Handle coated parts with soft gloves to avoid fingerprints, abrasion or contamination.
- Maintain adequate clearances to prevent coated surfaces from rubbing during thermal expansion
- Keep protected the coated parts from scaffolding appendices when mobile scaffolding is used like in attached photo. The mar force exerts by those appendices cannot withstand by organic coating film and will result in visible abrasions.



Post-Installation Protection

- If construction continues around installed profiles: Reapply temporary protection (low-tack tape, protective film)
- Protect from concrete, plaster, welding spatter or grinding dust
- Avoid prolonged adhesive contact

Protection of Coated Surfaces During Scaffolding Activities

Protecting coated surfaces during scaffolding work is essential to maintain coating performance, prevent early corrosion, and avoid costly rework.

We suggest following guidance:

- Maintain protective measures for the duration of scaffolding installation and use.
- Train personnel on handling practices that avoid damage to coated surfaces.
- Identify potential risks of contact or abrasion and instruct immediate corrective actions.
- Install protective wrapping on coated surfaces before any scaffold tube or fitting is brought into position.
- Ensure the materials used:
    - Are **non-abrasive**, **clean**, and free of contaminants.

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    - Provide sufficient cushioning to prevent mechanical impact.
    - Are securely fastened to prevent slippage during scaffolding activities.
    - Direct metal-to-coating contact is **strictly prohibited**.
    - Maintain a physical separation layer (e.g., soft pads, sleeves, timber battens) where proximity cannot be avoided.
- Maintain protective materials in place until scaffolding is fully removed.
- Inspect the condition of padding throughout modifications and repair or replace as necessary.
- Remove scaffold elements in a controlled manner, avoiding contact with coated surfaces.
- Conduct daily visual inspections to:
- Verify protective materials are intact and correctly positioned.
- Identify any signs of coating damage (abrasion, impact marks, chipping).
- Any observed damage shall be reported immediately to QA/QC and documented.
- Repairs shall be carried out in accordance with the approved coating repair procedure.

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IMPORTANT NOTE The information in this guidance note is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using an AkzoNobel product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for AkzoNobel products if available. All advice we give or any statement made about our product by us (whether in this guidance note or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advice given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this guidance note is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this guidance note is current prior to using the product.

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