



No.1

Guidance Notes

Guide for cleaning and maintenance of powder coated aluminium

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Scope

These recommendations cover procedures for cleaning and maintenance of painted aluminium extrusions and curtain wall panels. The procedures are intended for use with powder coated, architectural and aluminium extrusions such as window frames, door frames, railings and trim as well as curtain wall panels, column covers, spandrels, mullions, louvers, vertical trim, etc.

Purpose

These recommendations are intended to assist architects, contractors, owners, building managers who are concerned with the care and maintenance of painted, architectural aluminium. The information contains suggested methods as an aid in establishing safe, sound cleaning and maintenance procedures.

General

Organic coatings on aluminium do not normally show an appreciable amount of dirt collection. In many atmospheres dirt or soil would not indicate a detrimental risk to the coating, but cleaning and surface care may be desirable for the sake of appearance. Cleaning may become desirable in areas where heavy industrial deposits have dulled the surface, where materials from construction processes have soiled the surface or where cleaner, run-down from other surfaces should be removed. Local atmospheric conditions as well as building location within a geographical area quite naturally have an effect on cleanliness. Very often, rainfall may be sufficient to keep exterior surfaces appearing clean and bright. These factors coupled with owner attitude regarding surface appearance probably would determine cleaning schedules. Areas that are in direct sight at lower levels would more likely be cleaned. Less obvious areas would be less frequently cleaned or in some instances, hardly at all. Cleaning of powder coated aluminium may be scheduled with other cleaning, for example, glass and painted aluminium components can be cleaned at the same time.

Cleaning will be more often required in areas of low rainfall or in heavily industrialised areas. Foggy coastal regions with frequent cycles of condensation and drying may tend to give a build-up of atmospheric salts and dirt. In any climate, sheltered areas such as overhangs, may become soiled because of lack of rain washing. Thorough rinsing is especially important after cleaning of these sheltered areas.

If automatic wall cleaning equipment is to be used on a building, a test should be made early in equipment design to ensure that the cleaning solutions, brushes, as well as the frequency of cleaning should be taken into consideration to ensure that there is no detrimental effect on the coating.

Cleaning Procedures and Care After Installation

Construction residue, including concrete or mortar, etc., should be removed as soon as possible. The exact procedure for cleaning will vary depending on the nature and degree of soiling. Try to restrict cleaning to mild weather. Cleaning should be done on the shaded side of the building or ideally on a mild, cloudy day. Method of cleaning, type of cleaner, etc., of one component of the building must be used with consideration for other components such as glass, sealants, painted surfaces, etc.

Protective tape applied to the surface of powder coated profiles must be removed as soon as possible after installation. This will depend on other trades completing work in associated areas of the building.

In all circumstances protective tape must not be left on the aluminium surface for more than six months. Tape residue must also be removed within this period of time to ensure easy removal.

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 etc.

- 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)

In hazardous environments the normal frequency of cleaning should be at a maximum of three monthly intervals. However where there is high atmospheric pollution or an extremely hazardous atmosphere (i.e., a combination of factors above or others) the period between cleaning should be reduced.

Where the atmosphere is deemed to be non hazardous, e.g., rural or a "normal" urban environments, then the period between cleaning can be extended up to a maximum of 12 months. However, if heavy soiling occurs more regular cleaning is required.

Normal Environment:

- Clean and check every 12 months

Marine Environment:

- Clean and check every 3 months

Industrial Environment

- Clean and check every 3 months

Marine & Industrial Environment

- Clean and check every 3 months

Swimming & Leisure Pools

- Clean and check every 3 months

Cleaning Solutions

The best method of cleaning is by regular washing of the coating using a solution of warm water and mild detergent. All surfaces should be cleaned using a soft cloth or sponge, using nothing harsher than natural bristle brushes. (Cleaning of window sections etc., can be conveniently carried out at the same time as glazing cleaning.)

If the atmospheric pollution has resulted in heavy soiling of the coating, then nothing harsher than white spirit should be used for cleaning.

General Cleaning Tips

- Over-cleaning or excessive rubbing can do more harm than good.
- Strong solvents or strong cleaner concentrations can cause damage to painted surfaces.
- Avoid abrasive cleaners. Do not use household cleaners that contain abrasives on painted surfaces.
- Abrasive materials such as steel wool, abrasive brushes, etc, can wear and harm finishes.

- When using recommended solutions avoid drips and splashes. Remove run downs as quickly as possible.
- Avoid temperature extremes. Heat accelerates chemical reactions and may evaporate water from solution. Extremely low temperature may give poor cleaning effects. Cleaning under adverse conditions may result in streaking or staining. Ideally, cleaning should be done in shade at moderate temperature.
- Do not substitute a heavy duty cleaner for a frequently used mild cleaner.
- Do not scour painted surfaces.
- Never use paint removers, aggressive alkaline, acid or abrasive cleaners. Do not use trisodium phosphate or highly alkaline or highly acid cleaners. Always do a test surface.
- Follow manufacturers recommendations for mixing and diluting any recommended cleaners.
- Never mix recommended cleaners.
- To prevent marring, make sure cleaning sponges, cloth, etc, are grit-free.

General Inspection and precautions

It is suggested that the building owner provide a qualified inspector who will see that the desired effect is being obtained with the use of sound procedures. Inspection should commence early in the cleaning procedure.

Consideration must be given to building surroundings and possible effects of run down on shrubbery, personnel, equipment, etc., located below. These factors may require considerations toward methods of timing.

Disclaimer

The information provided in this document is for guidance only and is not intended to replace any manufacturers recommended procedures. Qualicoat UK & Ireland strongly recommend that a qualified member of the association is contacted and underwrites any procedures which apply to powder coated finishes.

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