

T.W.R. Commercial Limited

OEM guidance to Repair, cleaning, protection and maintenance of aluminium.

TWR Guidance

Cleaning and Maintenance

TWR Commercial Limited

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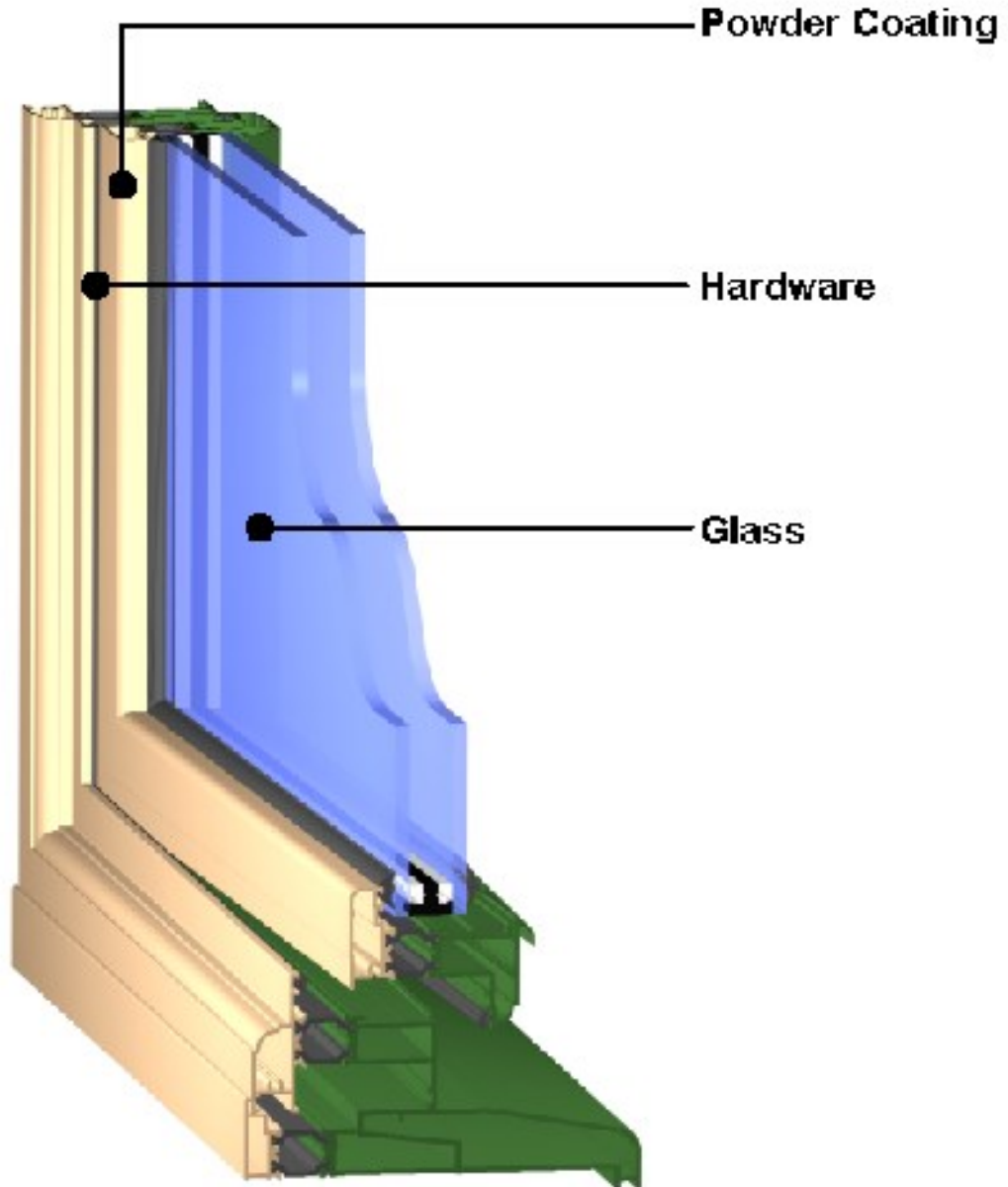
INTRODUCTION

In compiling these guidelines we would also draw your attention to a publication by the Council for Aluminium in Building, 191 Cirencester Road, Charlton Kings, Cheltenham, Gloucestershire GL53 8DF (TelNo: 01242 578278). "Guidance in the handling, care, protection, fixing and maintenance of aluminium windows and doors."

This document summarises the most recent publications of the standards; highlighting the prominent areas of relevance to the fenestration industry, in particular to the specific recommendations and requirements made in the building regulations Document M.

Craig Buist
TWR Commercial Ltd

Cleaning, Maintenance and Repair Procedure.



Polyester Powder Coating

Polyester powder coating is a superior surface colour treatment for aluminium products. Smart Systems offers an extensive range of RAL or BS colour colours in matt, satin or high gloss in flat, metallic or textured finishes. Coatings are based on polyester powders are electro-statically bonded onto the aluminium sections, which are cured at high temperatures to allow the powder to melt and form a continuous film providing a smooth durable surface.

General cleaning and maintenance

No organic paint coating, whether polyester or acrylic (or if the frame is PVC-U) is 'maintenance free' and that especially when installing in coastal districts or areas with high industrial pollution, advice should be given at the time of installation regarding the frequency and nature of cleaning maintenance needed. Modern organic finishes which we apply to architectural aluminium are practically identical to the types used on motor vehicles and therefore require a similar degree of care and attention which people typically lavish on their car bodywork. The frequency of cleaning relates directly to the decorative standard which the householder wishes to maintain and also the particular environment where the units are situated, the following are guidelines

In areas within the direct influence zones of salt water, industrial chemical plants, blast furnaces or other aggressive emission sources, the window should be cleaned at least every three months. In a relatively cleaner environment every six months should be sufficient. In carrying out regular maintenance outside, the internal surfaces are frequently neglected. After a period of time, grime and deposits from tobacco smoke, coal and oil fires, etc. can discolour the inside of the window frame and it is recommended that these should be cleaned at least once per year.

Cleaning Procedure

- Wash down with clean warm water containing a non-alkaline liquid detergent (in a concentration which can be handled safely with bare hands) using a non-abrasive cloth, sponge or soft bristle brush. This will remove grime, grease and any excess chalking. All ridges, grooves, joints and drainage channels where salt or other deposits can collect should be well washed out, thus preventing corrosion sites from occurring!
- Rinse thoroughly with clean water.
- Dry using a soft cloth or leather.
- Polish with a soft cloth to restore gloss and colour uniformity (for extra protection a wax polish can be applied once or twice a year again polishing with a soft cloth to restore gloss)

Where a reduction in gloss is observed, 'chalking' is evident or excessive staining has occurred, then an approved renovating cream may be carefully applied with a non abrasive cloth.

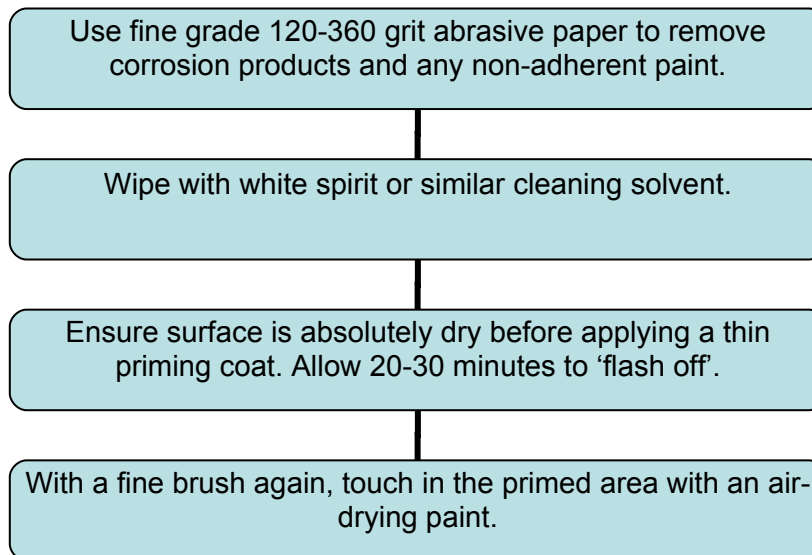
Note: Steel wool, strong acids and alkalis, and other abrasives should never be used. Provided it is not too abrasive, T-Cut or similar automotive paint restorer may be used to restore the paint finish. If there is any doubt on the effect of the cleaner, a few moments testing of the cleaner on an unobtrusive area of the aluminium is advised. It should remain in place for some time so that it dries, after which the area should be inspected for stains or for softening or discolouring of organic finishes. Care must be taken not to scour sharp corners of

section or damage beads too heavily where the paint film is normally thinner and it should be remembered that this operation should not be carried out too frequently.

Repair to Polyester Powder Coating

Whilst Polyester Powder Coating is exceedingly durable, blisters and corrosion sites may originate from areas where mechanical damage or scratches have penetrated the paint coating through to the aluminium, or from cut bar or butt ends, mitres, drill holes or drainage slots, where the aluminium is unprotected.

Typical repair procedure:



Note: It should be recognised that the air-drying paint will not possess the same weathering properties as the stoved organic coating, but nevertheless will give a reasonable amount of protection. Their use should of course be confined only to small areas of damage.

Glass

Coatings on the glass

General Maintenance

Where glazing systems consist of compounds or sealants and deterioration has occurred any defective material should, replaced or made good, as appropriate, using either the same materials as before, or a superior one which is compatible with the remaining materials. Maintenance of the systems is of particular importance where sealed double glazing units or laminated glasses have been installed.

Unit Breakdown

Where glazing systems consist of compounds or sealants and deterioration has occurred any defective material should, replaced or made good, as appropriate, using either the

Re-Glazing

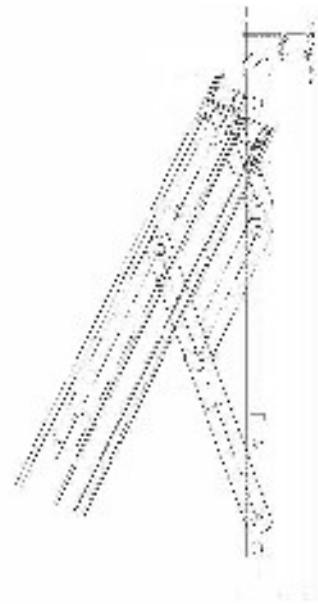
Many of the designs of aluminium windows incorporate glazing systems which allow the original glazing to be carried out in a factory or on site. Frequently these include sealing materials which are reusable. Beaded systems can be easily deglazed by a competent glazer/fitter; wrap-around glazing systems will need the window to be disassembled to be deglazed and may need the expertise of the original fabricator. It is not recommended for an end user to re-glaze, it is important that the glass replaced meets the thermal performance and for safety regulations and that the standard glazing procedures are followed. Any damage to the gaskets or beads may necessitate replacement to retain the weather performance of the product.

Hardware

Windows which are not in frequent use should be opened and closed periodically to check operation of hardware. Some types of hardware are designed to operate freely whereas others are designed to remain in a required position, by friction. In particular window hinges are commonly held open by friction on 'friction stays'. If the part is designed to operate freely, without friction, occasional applications of oil or grease on the rotating or sliding surfaces should be applied. Hardware which incorporates plastic bearings pads or friction surfaces should not be lubricated.

Replacement of Damaged Components

If damage occurs to the furniture and fittings these can usually be readily replaced by realising the fixing screws and changing the fitting.



When necessary any dust and dirt must be removed from the components as this could affect the smooth operation of the system.

The system must not be cleaned with water and / or other cleaning products as this could affect the lubricants and the corrosion resistance of the gear.

Maintenance should be carried out at suitable intervals relative to the amount of use and environmental conditions.

Qualicoat 'Specification for a quality label for powder coatings on aluminium for architectural applications.'

Qualicoat is a sign of good product quality. It establishes the requirements, which the paint formulation, pre-treatment, coating equipment and finished product must satisfy. We have undergone a rigorous assessment by an independent inspection organisation. Further inspections are unannounced and samples from our production line are randomly selected for further testing to continuously evaluate our ability to meet the requirements of the specification. Qualicoat sets the standard for the quality of the finished product.

BS6496:1984 Specification for Powder Organic Coatings for Application and Stoving to Aluminium Alloy.

BS EN 12206-1:2004 Paints and varnishes - Coating of aluminium and aluminium alloys for architectural purposes - Part 1: Coatings prepared from coating powder.

White Paper

TWR Commercial Limited