

Balcony railing & partition: User Manual

I. General

Every user of a balcony railing (balustrade) or partition is required to maintain the cleanliness and neatness of the products while using them as intended and without harming their technical condition in any way which would result in any hazard.

Do not attempt to fasten any parts or components to a balcony railing / partition without prior authorization.

No accessories of your patio, balcony or loggia shall damage the surface of the railing / partition or cause any hazard to third parties.

Do not increase the structural height of the patio, balcony or loggia.

Immediately report all damage of the product.

II. Cleaning and maintenance

Clean and maintain the glass with due safety precautions. Use the necessary personal protective equipment (PPE) during work. Use proper techniques at locations with restricted access. Follow all applicable safety regulations and instructions from national / local authorities, cleaning contractor associations, and the requirements of the end user (corporate or natural).

Carefully read and understand all guidelines applicable to the chemicals and detergents to be used. Follow the guidelines strictly and consult the manufacturer(s) when in doubt. Minimise the consumption of all chemicals and detergents.

The minimum cleaning frequency is 6 months.

1) GUIDELINES FOR CLEANING POWDER COATINGS

developed by QUALIPOL (The Association of Aluminium Surface Processors)

These Guidelines are provided to end users of the coatings. Follow the Guidelines to maintain your warranty rights related to the coating.

Cleaning and washing following the product installation are often the cause of coating defects. Hence, follow the guidelines which follow:

1. Wash with clean water only; a small dose of neutral or slightly alkaline detergents can be added. Cleaning can be improved by using soft cloths which do not scour or otherwise abrade the surface.
2. The coating temperature during washing must not be higher than 25°C.
3. The temperature of the water and detergent mixture must not be higher than 25°C. Do not clean the coating with pressurized steam.

4. Do not use strong acidic or strong alkaline detergents or surfactants which may react with aluminium.
5. Do not use abrasive cleaners or clean the surface by scouring. Industrial-grade soft cotton cleaning textiles can be used. Do not press the textile against the surface with excessive force while wiping.
6. Do not use organic solvents based on or containing esters, ketones, alcohol, aromatic compounds, glycol esters, chlorinated hydrocarbons, or chemicals with similar action.
7. Do not use any detergent the origin or identification of which cannot be established.
8. Greasy, oily and tar-like dirt can be removed from the substrate by applying oil-based solvents refined to remove all aromatic compounds. Dirt from residues of adhesives, silicone rubber and adhesive tape shall be removed likewise.
9. No detergent to be used should stay applied for more than 1 hour. If necessary, repeat the cleaning after 24 hours.
10. Immediately rinse the surface with cool and clean water after cleaning.
11. Before cleaning, test the effect of the detergent / cleaning agent to be used on a concealed part of the surface. If found to react adversely on the surface, do not use the tested detergent / cleaning agent.
12. Leaving the protective film / tape on powder-coated profiles exposed to sunlight and/or high ambient temperatures may cause chemical reactions and extremely firm bonding of the film / tape with the powder coating. Remove all protective film / tapes immediately after the installation process.
13. Effects unrelated to weather (sunlight, frost or precipitation):

The aluminium profiles on building perimeter walls are exposed to aggressive air pollutants and act as substrates for precipitation of the pollutants. Hence, the profiles require periodic cleaning with the frequency that will depend on location and exposure.

The cleaning frequency depends on the following:

- geographic location of the building;
- environmental conditions of the building, which can be classified as: marine / coastline environment, acidic / alkaline industrial environment, etc.;
- the sheltering of the building by adjacent structures.

14. The powder coating must be protected against direct contact with lime, cement and other alkaline construction materials, which may result in efflorescence, which is a white, fine-crystalline and hardly soluble tarnish on the railing / partition surface. Efflorescence is caused by migration of salts dissolved in water from the inside to the outside porously. Evaporation of water causes the salts to precipitate in the form of a white tarnish. The most common efflorescence salt on façade coating layers is virtually insoluble calcium carbonate (CaCO₃), which originates from the use of cement-based construction materials. When cement is hydrated, calcium hydroxide (CaOH) is formed which reacts with carbonic acid and is converted into calcium carbonate. Depending on the construction product ingredients, other salts may precipitate and form efflorescence.

Pointing grouts and other materials, like construction compounds, mixes, adhesives, jointing mortar and adhesive tape must be pH-neutral and free from any substances harmful to the coating or the oxidized layer.

Exposure to sunlight increases the aggressive action of these chemicals.

15. Cleaning frequency of powder coating

The cleaning frequency of railing components (structural aluminium profiles) will depend on the ambient conditions and environmental contamination. The profiles become dirty faster when exposed to an industrial environment, urbanized areas with high vehicular traffic, in coastal areas, and whenever exposure to rain is low. The profiles shall be cleaned as frequently as will make the regular cleaning process specified above sufficiently effective.

Following each heavy rainfall, it is recommended that water be removed from the surface of the top rail to prevent airborne dust and precipitates from the rain from forming streaks on the railing.

The minimum recommended cleaning frequency is 1 month.

2) Cleaning and maintenance of glass

developed by YourGlass - AGC

2.1. Regular cleaning

In most circumstances, glass requires washing with plenty of clean water. A small dose of a neutral detergent or another commercially available window cleaning formula can be added to the water. Use rubber squeegees or special drying cloths to wipe the glass clean and dry. Once washed clean, rinse the glass with plenty of clean water and remove excess wash water with a rubber squeegee.

2.2. Cleaning frequency

The cleaning frequency of glass will depend on the ambient conditions and environmental contamination. The glass becomes dirty faster when exposed to an industrial environment, urbanized areas with high vehicular traffic, in coastal areas, and whenever exposure to rain is low. The glass shall be cleaned as frequently as will make the regular cleaning process specified above sufficiently effective.

The minimum recommended cleaning frequency is 1 month.

2.3. Special cleaning procedures

If regular cleaning proves to be ineffective, viable alternatives exist:

- Greasy spots and other organic dirt can be removed with solvents, e.g. isopropyl alcohol or white spirits, which must be used to soak a clean and soft cloth with which to wipe the glass clean.
- Other types of dirt can be removed by light polishing of the glass with a water emulsion of cerium oxide (use 100 to 200 grams per 1 litre of water).

- Next, rinse the glass with clean water and follow with the regular cleaning procedure specified above.

3. First cleaning after installation (at the last stage of the project)

Before the first cleaning after the installation (at the last stage of the project), the glass may be heavily soiled. The following cleaning procedure is recommended:

- Immediately remove all stickers and cork spacers.
- Rinse the glass with plenty of clean water to remove as much dust as possible.
- Proceed with the regular cleaning procedure. Inspect closely for persistent dirt.
- Carefully remove the persistent dirt, which may include residues of sealants, putty, mortar, etc. Use a dedicated glass scraper or a razor. This operation involves a high risk of scratching the glass. Proceed with extreme caution, especially with coated glass.
- If necessary, proceed with the special cleaning procedure.

4. Cleaning and maintenance of gaskets and threaded fastener checks

4.1. Wash and clean with commercially available, diluted detergents. Follow instructions for their use.

4.2. At least once a year, the end user shall check all fasteners (anchor bolts, rivets and screws) which are safety critical for proper tightness;
each check shall be recorded in the building project log;

- check the wear and tear of all structural parts;
- check that all controls and adjustment parts work properly;
- if any defect is found, it must be reported to the service for repairs.

4.3. The foregoing cleaning, maintenance and checks shall be performed after every event with strong winds.

NOTE:

Never use the following for maintenance or cleaning:

- Organic solvents, paints and coats;
- Disinfectants;
- Sharp tools, wire brushes, sandpaper, or other abrasive materials.