

MAINTENANCE INSTRUCTIONS

POWDER COATED FACADE CLADDING PRODUCTS

FACADE CLADDINGS

RUUKKI

Energy-efficient steel solutions for better **LIVING. WORKING. MOVING.**

- **Introduction**

Architectural Powder Coatings are organic coatings which need to be cleaned and maintained regularly to ensure that the decorative and protective properties of the coating are retained. The facade cladding products and flashings of buildings are exposed to many kinds of impurities and pollution in the air. These include sulphur, chlorine and nitrogen compounds causing acid rain, and various mineral salts, dirt and soot. These impurities together with water and UV radiation of the sun affect the coating. The effects are worst on those areas of the building where impurities are not washed away by rainwater. From the point of view of the durability of coated sheet the worst things are knocks and scratches, in which the impurities come into direct contact with the surface under the paint coating. The effect of the impurities in the air is greatest close to polluted industrial and in coastal areas. Emissions containing sulphur or chlorine are especially difficult. Impurities put a strain on the coatings and reduce their useful life, so the regular cleaning of wall surfaces is an important part of the care and maintenance of the coatings.

- **Annual inspection**

Parts of a building where powder coated sheets have been used should be inspected regularly. If any defects are found in the coating they should be repaired immediately, in order to ensure long life time. The annual inspection should include the following procedures:

- Visual inspection

Visual inspection of the coated surfaces should be carried out once a year as a general inspection. A more thorough inspection should be carried out every 5 years during the warranty period. The coated surfaces should then be inspected at a viewing distance of 1.5 metres. After the warranty period has expired, the surface should be inspected every two years.

- Cleanliness of horizontal flashings

Check the cleanliness of horizontal flashings. Dirt and soil cause a corrosion risk by keeping the surface of the sheet wet. Dirty horizontal flashings also spoil the appearance.

- **Cleaning and removal of dirt**

Rainwater is usually sufficient to keep colour coatings clean. Impurities, such as stronger dirt, moss and leaves from trees, however, should be cleaned off the facade cladding products and horizontal flashings once a year. Coating should be cleaned with a soft brush and water or high-pressure water (<100 bar). More stubborn dirt can be removed using a cleaning agent suitable for paint coatings. Difficult dirt spots can be removed with a cloth moistened in white spirit. The rinsing should be carried out from the top of the facade downwards after the cleaning agent has taken effect for a few minutes.

Usual maintenance can be done using water with mild detergent, ammonia containing alkalic washing detergent. For example Panssipesu of Tikkurila or Peltipesu of Teknos. It should be noted that the use of unsuitable or excessively strong cleaning agents will damage the powder coating. Abrasive cleaning methods must not be used.

The frequency of cleaning will depend on many factors including:

- The geographical location of the building
- The environment surrounding the building, i.e., marine, 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)
- The powder coating chemistry

- **Touch-up painting**

It is always worthwhile to repair any damage which occurs to the coating as soon as possible. Only paints suitable for repair painting of coatings should be used. Spray-paints must not be used. If the damage reaches down to the primer coat only (steel material), one coat of paint is sufficient. If, however, the damage reaches down to the zinc, it is recommended that a second coat of paint be applied after the first coat is dry.

When good result is wanted, it is important to take these factors into account:

- The adhesion properties and weather durability of touch-up paint
- Gloss and colour correspondence with Ruukki's powder coatings

Most recommended touch-up paints are acrylates, acrylics and polyurethanes. As an example Tikkurila's PanssariAkva. Recommended gloss is 10-20. Before painting the scratch, it is recommended to clean the scratch area with wet smooth cloth. After it is dried, touch-up painting can be done. It is recommended to use as small brush as possible. If there is more dirt at the scratch, it is recommended to clean with smooth cloth, which is treated with white spirit.

- **Maintenance of larger damaged area**

If for example whole Liberta panel is damaged, it is recommended to replace this with a new panel. It is impossible to find such maintenance paint, which looks totally same (gloss, colour, surface structure) as powder coating.

- **Bending of powder coated sheet**

Bending of ultra durable powder matt coating is NOT allowed. Bending can be done only with the modified standard quality smooth semimatt powder coating.

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solutions for better living,
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