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Cleaning and maintenance of Metallic Effect powder Coatings

1) Foreword

The scope of this guidance note is to give general guidelines concerning cleaning and maintenance of metallic effect powder coatings, and not to replace any specific advice issued by the powder manufacture.

2) Introduction

Metallic effects arise through light reflection, absorption and mirror effect of the metallic effect pigments contained in the paint. The impression of different colours and/or effects can be achieved through the type, quantity and orientation of these pigments.

These metallic powders can be used in both exterior and interior environments.

The cleanability and suitability of the powder, for an environment or end use, starts with the colour selection process.

There are limits to the colours and effects achievable and these limits should and can be discussed with the powder manufacturer during the selection process in order to find the best technical and aesthetic finish.

In certain instances the powder manufacturer may propose the application of a suitable clear topcoat. The cleaning of metallic effect powder coated surfaces is in general more difficult than for solid-colour coatings. Furthermore the cleanability and chemical resistance depend upon several factors, e.g.

- Composition of the powder coating
- Type and concentration of the cleaning medium or chemicals
- Type and condition of soiling

When cleaning, attention must, without exception, be paid to the manufacturer's datasheet (powder coating and cleaning agent) and the applicable guidelines of the various associations (e.g. GRM. Qualicare, AMRAL).

3) Frequency Of Cleaning

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

- Is the coating interior or exterior
- The geographical location
- The surrounding environment, i.e., marine, swimming pool, industrial, or a combination of these environments etc.
- Levels of atmospheric pollution
- Prevailing wind
- Protection or screening i.e. other buildings in a block, trees, noise screens
- Possibility of airborne debris (e.g., sand/dust, sawdust etc.) settling and/or causing erosive wear of the coating.
- If the environmental circumstances change during the lifetime of the coating (e.g., rural becomes industrial, office to factory).

In addition 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 end users' responsibility to be aware of such standards.



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4) Method Of Cleaning

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.

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

In addition the powder manufacture may impose cleaning requirements as part of a warranty or guarantee. Any deviations tend to invalidate such warranties.

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 18 months. However, in cases where heavy soiling occurs more regular cleaning is required.

If the powder coating is subject to any hazardous unusual environmental factors, or is close to salt water, an estuary or marine environments then the powder manufacturer should be consulted on an individual project basis.

Do not under any circumstances use strong solvents or solutions containing, e.g.:

Chlorinated Hydrocarbons

Esters

Ketones

Abrasive Cleaner or polish

Strong acids or bases

Any cleaning solvent should be tested on a small hidden area.