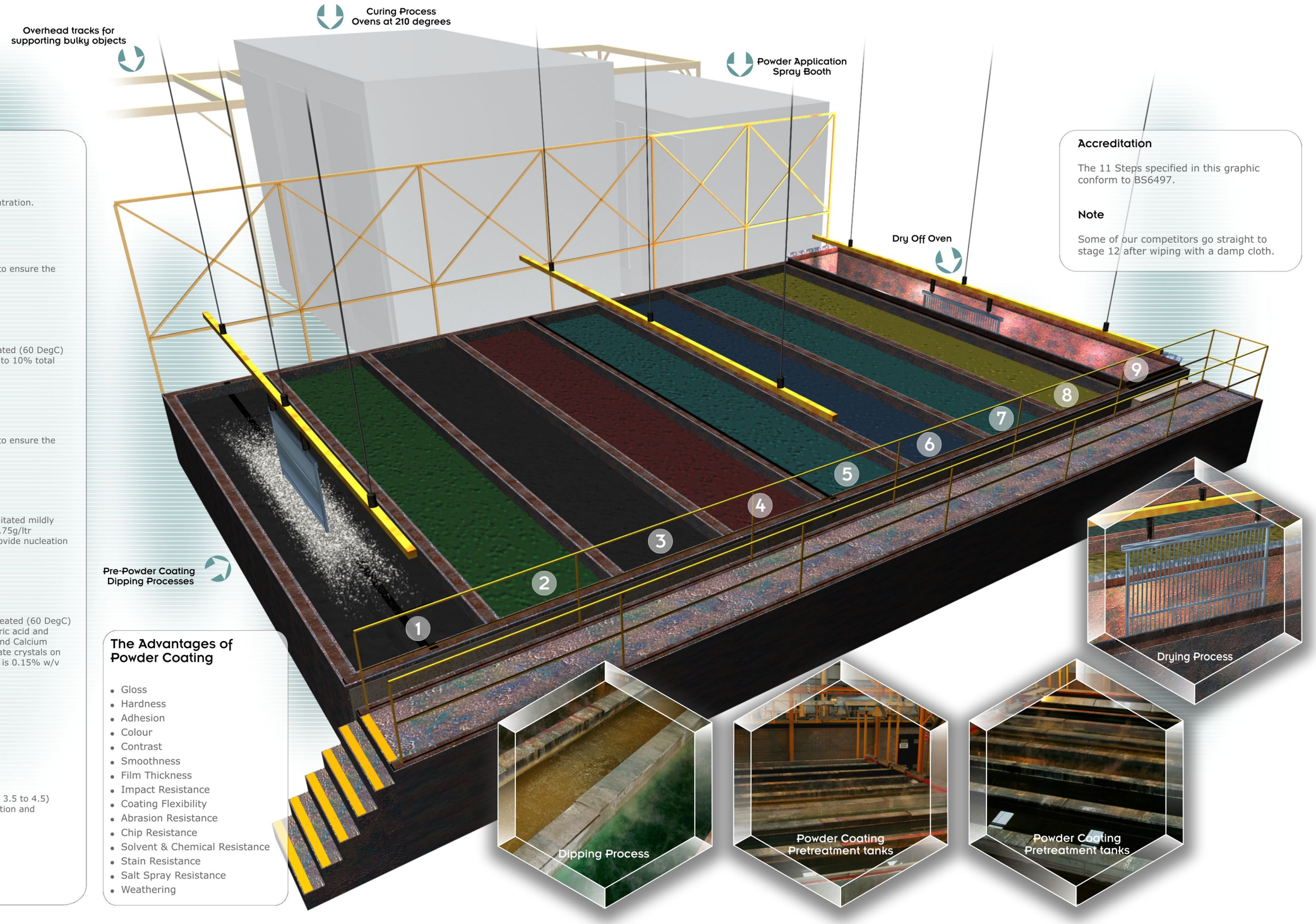
Stage 2

THE POWDER COATING PRETREATMENT PROCESS



1 Alkali Degrease

Alkali degrease in heated (60 DegC) caustic (sodium hydroxide) solution at 7g/ltr concentration.

2 Rinse x 2

Rinse in water at ambient temperature twice to ensure the Alkali agent is fully rinsed.

3 Acid Etch

Acid / etch stage involving immersion in a heated (60 DegC) mixture of sulphuric and phosphoric acid at 8 to 10% total acid which cleans and de-rusts the substrate.

4 Rinse x 2

Rinse in water at ambient temperature twice to ensure the Acid agent is fully rinsed.

5 Refining Agent

Refiner stage involving immersion in an air agitated mildly alkaline suspension of a titanium powder at 0.75g/ltr concentration and ambient temperature to provide nucleation for crystal formation in the next stage.

6 Zinc Phosphate

Zinc Phosphate stage where immersion in a heated (60 DegC) aqueous solution of Zinc, Phosphoric acid, Nitric acid and other metal ions such as Manganese, Nickel and Calcium produces a complete covering of Zinc Phosphate crystals on the surface of the substrate. The level of Zinc is 0.15% w/v and the total acidity is 4 to 5%.

7 Rinse

Rinse in water at ambient temperature.

8 Sealer Solution

Sealing rinse stage, the final mildly acidic (pH 3.5 to 4.5) chromium-free post rinse at 0.25% concentration and ambient temperature.

9 Drying Oven

Final pre-treatment stage is the Dry off oven.

The Advantages of Powder Coating

- Gloss
- Hardness
- Adhesion
- Colour
- Contrast
- Smoothness
- Film Thickness
- Impact Resistance
- Coating Flexibility
- Abrasion Resistance
- Chip Resistance
- Solvent & Chemical Resistance
- Stain Resistance
- Salt Spray Resistance
- Weathering

Accreditation

The 11 Steps specified in this graphic conform to BS6497.

Note

Some of our competitors go straight to stage 12 after wiping with a damp cloth.