



Overview

Galvanizing is an ancient process which was first patented as an industrial process in France in 1836. A relatively simple principle of immersing clean steel into molten zinc, a series of zinc-iron alloy layers are formed by a metallurgical reaction between the iron and zinc, providing a robust coating which is an integral part of the steel.

Galvanizing is not a layer on top of steel, it is integral to the steel.

There are 2 common types of galvanizing used for architectural purposes. Hot Dip where steel is immersed or "dipped" into molten zinc and continuously galvanized steel sometimes called "pre-galvanized sheet" or "Zintec"

Key Points

- Excellent corrosion resistance.
- Can be powder coated but needs specialist preparation.
- Has excellent track record with powder coating.
- Guarantees up to 25-years when powder coated.
- Low maintenance cost.
- With PPC gives a life to first maintenance of up to 25-years.

Specification

Hot dip Galvanizing process in accordance with EN ISO 1461.

Powder coating in accordance with EN 13438 and EN 15773. See also "Polyester data sheet"

Design detail is important. Powder coating and galvanizing have very similar design and process requirements.

Galvanizing zinc thickness depends on the base metal thickness and surface profile. Typical thickness of zinc is 70 to 100 microns. Typical thickness of powder coating on top is >60 microns. A total thickness exceeding 130 microns.

Duplex coating

Sometimes referred to as a duplex coating, galvanizing in conjunction with powder coating is an excellent protection and decorative system.

Galvanizing and powder coating are 2 separate disciplines which can be specified via a single supplier or by 2 suppliers acting together or independently. It is important to recognise that when specifying a duplex finish that all parties work together.

Galvanizing is supplied by Powdertech as part of a one-stop shop. This ensures that contractual responsibility is clear.

If supplying galvanizing to a powder coater it is important that the zinc is un-passivated and corrosion-free.

Specific galvanizing plant details can be found at [The Galvanizers Association](#)

Process

Hot dip galvanized steel for powder coating.

If a thick coating of zinc is required, the first process is to shot blast the steel. See our shot blast data sheet.

After galvanizing the material is fettled (smoothed) and pre-treated (see pre-treatment data sheet). If required, the material is "degassed" before the powder coating is applied to a minimum film thickness of 60 microns.

Pre-galvanized mild steel for powder coating.

For internal use the material is pre-treated (see pre-treatment data sheet) before powder coating to a minimum film thickness of 60 microns.

For external use the material is zinc-rich powder primed to protect cut edges of the sheet before curing and applying the colour top-coat. The total film thickness exceeds 120µ.

1. Degassing is the term used to describe pre-heating of the galvanized steel to remove moisture trapped between the layers of zinc

Applied under ISO 9001: 2015 Quality Management System. Approval Nr: LRQ 10532977

Product information

Project information

Warranty

For C2 and C3 environments: 15 to 25-year warranty for gloss, colour and adhesion is offered as standard.

For C4 and C5I & C5M environments: Guarantees are conditional on project location, environmental conditions and pre-contract approval.

Warranties are offered in conjunction with Powdertech standard terms and conditions and a documented cleaning and maintenance programme.

Please note:

Whilst every care has been taken to provide accurate information this document is for guidance only and should be read in conjunction with other data sheets where applicable.

This document forms no part of a contract. Any warranty is subject to individual review.