Powder coating *metalwork*: what to specify

Which scheme covers which metal, what each asks for, and wording to paste into a specification. General guidance: confirm every figure against the current documents.

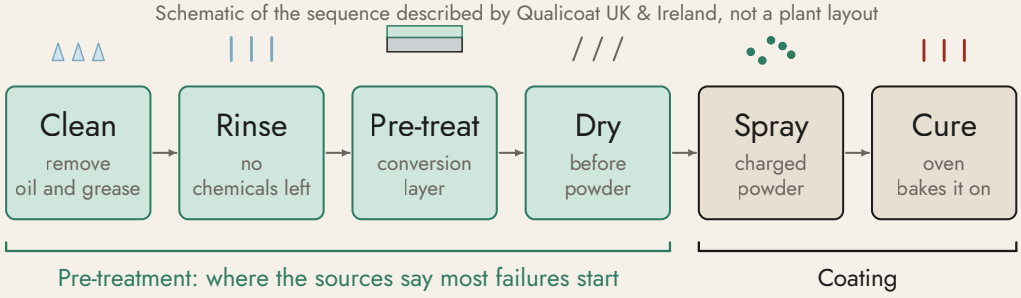
AT A GLANCE

Metal	Cite	What it covers	What it sets (as read)
Aluminium, indoors or out	Qualicoat (26th Edition, valid 1 January 2026)	A certification scheme: licensed coater, approved powder and pre-treatment, inspected. Classes 1, 2 and 3 by weathering test (1, 3 and 10 years in Florida).	Film at least 60 um (classes 1 and 2) or 50 um (class 3) in the March 2021 comparison. Confirm against the current volumes.
Aluminium near the coast	Qualicoat with the SEASIDE endorsement	A deeper etch (2 g/m² against 1 g/m²) and an extra filiform corrosion test.	Qualicoat UK & Ireland advises it within 5 km of the British coast or a tidal estuary.
Aluminium, by standard	BS EN 12206-1:2021	Requirements and test methods for powder coatings on aluminium. A standard, not a scheme with licences.	Its thickness clause was not read.
Bare steel	Qualisteelcoat Technical Specifications 5.0.1 (valid 1 January 2026)	A certification scheme for organic coatings on steel: systems set by pre-treatment, coats, thickness and corrosivity class.	One coat of 80 um: class C2 only. Two coats, 140 um: C2 to C4. Three coats, 200 um: C2 to C4.
Hot-dip galvanised steel	Qualisteelcoat; BS EN 13438:2013; BS EN 15773:2018	13438: powders and coatings on galvanised steel for construction, not the process. 15773: the agreements for galvanise plus powder.	Qualisteelcoat: 80 um in one coat, C2 to C4; 140 um in two, C2 to C5.
Stainless steel, brass, copper	None found	No standard or scheme specific to them was found in what we read.	Specify the whole system and approve a coated sample.

um is micrometres (microns). Corrosivity classes C2 to C5 are the ISO 12944-2 atmospheric classes: C1 is a heated clean interior, which Qualisteelcoat does not use as a column, C4 includes indoor swimming pools. The Qualicoat figures are from a March 2021 comparison that pre-dates the 26th Edition.

Same line, whatever the colour: the finish depends on the steps before the powder

Schematic of the sequence described by Qualicoat UK & Ireland, not a plant layout



The powder coating line in six steps. Original drawing by Make Bespoke Studio, after the sequence in Qualicoat UK & Ireland Guidance Note 2; schematic.

SPECIFICATION WORDING

ALUMINIUM

Architectural powder coating to [QUALICOAT] specification, class [2], from an approved supplier [with the SEASIDE endorsement for sites within 5 km of the coast]. Coater to hold a current licence for [class and endorsement] and to supply the certificate before work starts. Colour [RAL [ ]] to be the [maker and product]; gloss [ ] GU plus or minus [ ] at 60 degrees (ISO 2813); texture [smooth]. Cut edges linished to [0.5] mm radius and burrs removed before coating.

BARE OR GALVANISED STEEL

Powder coating system [P-ST2-M, Qualisteelcoat 5.0.1 Annex 3] for corrosivity category [C3]: pre-treatment [mechanical, Sa 2 1/2], primer [60] um and polyester top coat [80] um, total [140] um. Dry film thickness measured to [ISO 2808] on the sampling plan in [ISO 19840]: mean not below [140] um, no reading below 80 per cent of it. Weld spatter and burrs removed and edges radiused to [ ] mm before coating. Coater to state its scheme licence and the approved system in writing.

APPEARANCE, APPROVAL AND OTHER METALS

Colour [RAL [ ]], gloss [ ] GU plus or minus [ ] at 60 degrees. Appearance judged at [3] m (interior) or [5] m (exterior) in diffuse daylight, unaided: no wrinkles, runs, sags, craters or blisters. Control sample [S-01] coated by the coater on [the same metal and route], signed [date]. Stainless steel, brass or copper: coater to propose the system (pre-treatment, primer, powder, thickness, cure, tests) in writing before pricing, and a coated sample to pass an adhesion test before approval.

TERMS USED

Powder coating

A dry powder sprayed onto metal and cured in an oven into a continuous paint-like film. It suits parts that fit the oven and gives a wide colour and gloss range.

Qualicoat

An industry quality scheme for coatings on architectural aluminium. It adds production testing and approved materials on top of the basic European standard.

Gloss unit (GU)

A measured value of how shiny a surface is, usually at 60 degrees. Trade words like matt, satin and gloss are not fixed bands, so give a GU target and tolerance.

Qualisteelcoat

A quality label and specification for organic coatings, liquid and powder, on steel: bare, galvanised and metal-sprayed. It sets systems by pre-treatment, coats, thickness and corrosivity class.

Pre-treatment (conversion coating)

The cleaning and chemical or mechanical preparation of a metal before it is coated, including a thin layer that seals the surface and gives the powder a key.

STANDARDS AND SOURCES

- Qualicoat, Introduction to the QUALICOAT Specifications, 26th Edition (valid 1 January 2026): volumes available on written request.
- Qualicoat UK & Ireland: Guidance Notes 2 and 7 (April 2025); Qualicoat TIS Nos 1 and 4
- Qualisteelcoat Technical Specifications 5.0.1 (valid 1 January 2026): Annex 3 and sections 2.2.2, 6.12 to 6.14.
- BS EN 12206-1:2021 (aluminium); BS EN 13438:2013 and BS EN 15773:2018 (galvanised steel): BSI listings read; texts not read.
- PCI, Architectural Specification Comparison (March 2021): pre-dates the 26th Edition.

Full guide: https://makebespoke.com/trade/technical/powder-coating-metalwork. Make Bespoke Studio coordinates manufacture through its partner workshops. Figures are guidance only and your specification governs; some may be superseded, so contact the studio to verify.