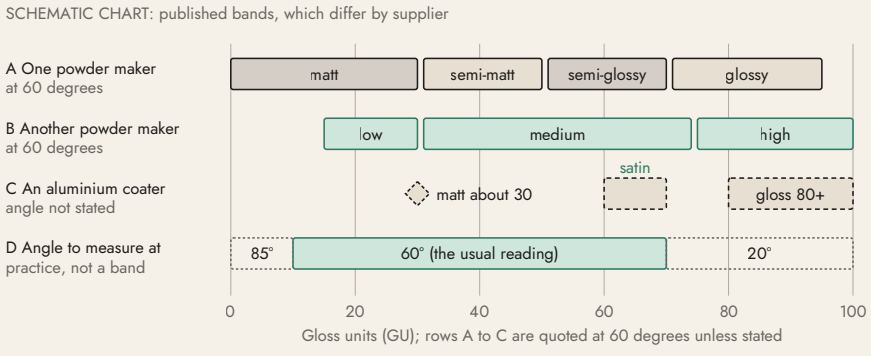
# RAL, BS 4800 and NCS *colour references*

A colour reference fixes only the hue. Name the system, the maker and product, the gloss in GU at 60 degrees with a tolerance, the texture, the batch and an approved sample.

## AT A GLANCE

| System | Reference looks like | What it is | Watch for |
|---|---|---|---|
| RAL Classic | RAL 7016 (four digits) | 216 colours; the first digit is the colour family. The usual reference for powder coat and paint on metal. | Fixes hue only: not gloss, texture or effect. Each maker mixes to it, so two makers' RAL 7016 are two products. |
| RAL Design System plus | RAL 270 30 20 (hue, lightness, chroma) | 1,825 colours on a CIE L*a*b* basis, for precise colour choice. | A coater may have to match it to order: ask. |
| RAL Effect | Three digits, a hyphen, a suffix (M for metallic) | 490 colours, 70 of them metallic; most used in industrial powder coating. | Metallic effects change with angle, batch and application. |
| BS 4800:2011 | Two digits, a letter, two digits | A schedule of building-paint colours. Withdrawn by BSI on 5 November 2024. | Still on old specifications and some fans. Match from a sample. |
| BS 381C:1996 | A number and a name | 91 colours for identification, coding and special purposes. BSI lists it as current. | Not a coordinated range and not tied to paint: use it where a specification calls for it. |
| NCS | NCS S 2030-Y90R (blackness, chromaticness, hue) | A system that describes how a colour looks. S means the standard collection. | Not a powder reference: a coater maps it to the nearest product. Agree a tolerance. |
| Maker's colour and approved sample | A product code; a sample ref and date | What is actually mixed or coated, and the coated sample on the real metal. Anodised and PVD colours have their own names, not RAL. | Name the maker's colour with the reference it matched, and the batch. The sample is the final authority. |

Counts and numbering from RAL's FAQ and the BSI listings, read 5 November 2026. Conversions between systems are approximate: see the section on converting.




Gloss bands as three suppliers publish them (row C plotted as GU). Original chart by Make Bespoke Studio; supplier ranges, not limits.

## A COMPLETE COLOUR CALL-OUT

1. Colour: system, number and collection, for example RAL Classic 7016.
2. Made by: the powder or paint maker and its product code.

3. Gloss: GU, a tolerance, the angle and the standard.
4. Texture: smooth, fine or coarse.
5. Effect and batch: plain or metallic; one batch for each visible run.
6. Proof: an approved sample on the real metal, dated and kept.

## SPECIFICATION WORDING

### POWDER-COATED ELEMENT

Finish: polyester powder coat, colour [RAL 7016] (RAL Classic), by [powder manufacturer], product [reference]. Gloss [30] GU [+/- 5] at 60 degrees to EN ISO 2813 (edition [ ]) on a plain flat panel. Texture [smooth]. One batch for the visible run [batch no.]. Approved sample [ref. __] governs.

### METALLIC OR TEXTURED POWDER COAT

Finish: [metallic] polyester powder coat, [RAL ____ / maker's reference]. One visible run on the same line, at the same settings, in the same orientation, from one batch. Tolerance samples [ref. __] approved before production. Textured gloss judged by sample, not meter.

### MATCHING AN EXISTING FINISH

Colour to match the existing [metalwork, formerly BS 4800 ref. __, a withdrawn standard]. Contractor to take a [spectrophotometer reading] at [location], propose the nearest [RAL / maker] reference and submit a coated panel on [the specified metal]. Tolerance [dE not more than __] under [light source].

### ANODISED, PVD OR COLOURED STAINLESS

Colour is defined by approved sample [ref. __], not by RAL. The finisher is to state the process, the sample's colour reference and the batch.

## TERMS USED

**BS 4800**
A British Standard schedule of paint colours for building purposes. BSI withdrew BS 4800:2011 on 5 November 2024.

**Gloss unit (GU)**
A measured value of how shiny a surface is, read with a glossmeter at a stated angle, usually 60 degrees. A polished black glass reference reads 100 GU.

## STANDARDS AND SOURCES


- RAL gGmbH, FAQ (collections, numbering, printed charts)
- BSI Knowledge, BS 4800:2011 (withdrawn 5 Nov 2024)
- BSI Knowledge, BS 381C SET:1996 (R2002) (current)
- BS EN ISO 2813:2014, gloss at 20, 60 and 85 degrees: scope from a listing; text not read.
- PCI, Architectural Specification Comparison (March 2021)
- PCI Magazine, Understanding Gloss Standards and Units (2022)
- Euro Inox, Colouring Stainless Steel, Vol. 16 (2011); NCS Colour AB overview
- Powder makers' sheets and trade pages: named in the working notes.


Full guide: https://makebespoke.com/trade/technical/ral-bs-4800-and-ncs-colour-references. 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.