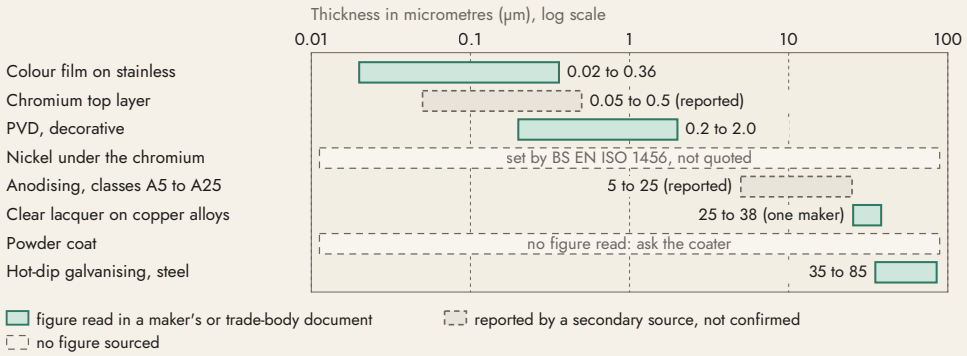
Plating and coating *thickness* in microns

Decorative finishes are fractions of a micrometre to tens of micrometres thick. Ask for the base metal, each layer, a certified minimum thickness and a worn sample.

AT A GLANCE

Finish	Thickness found	Beneath it, and when it wears	Basis
Solid metal (brass, bronze, stainless)	No coating. A 1 mm strip is 1,000 µm of the same metal.	The same metal all through. Re-polishing removes some metal.	Conservation body
Plated nickel and chromium	Chromium: a fraction of a micrometre (reported 0.05 to 0.5). Nickel: set by BS EN ISO 1456, not quoted.	Base metal, nickel, then chromium. The layer beneath shows when worn.	Public reference; standard not read
Gold plating	No hardware figure found. Jewellery grades: under 0.5 µm is flash, 2.5 µm or more heavy.	Base metal, usually a nickel layer. Wears at touch points.	Public reference; sources differ
PVD (decorative)	0.2 to 2.0 µm (one coating house); about 0.3 µm typical (Euro Inox). Colour film on stainless: 0.02 to 0.36 µm.	Stainless or titanium; brass needs nickel and chrome plating first. Damage is not repairable on site.	Datasheet; Euro Inox 2011
Anodising (aluminium)	A5 and A10 for interiors, A15 to A25 outdoors; the number is µm.	The aluminium's own oxide.	One UK supplier's article
Powder coat	No figure read. A paint film, far thicker than PVD or plating.	Any metal that fits the oven. Ask the coater.	None read
Clear lacquer on brass or copper	About 25 to 38 µm dry, in thin coats (one maker).	Freshly cleaned brass or copper. Can wear or fail where handled; no test data.	Lacquer maker's data sheet
Hot-dip galvanising (steel)	Local minimum 35 to 70 µm; mean minimum 45 to 85 µm.	Steel. Shows the scale of a protective coating.	Galvanizers Association; EN ISO 1461:2022

1 micrometre (µm) is a thousandth of a millimetre. We could not read the plating, anodising or powder-coat standards, so those figures are reported by secondary sources or missing. No life in years is given for any finish.



Finish thickness on a log scale, in micrometres. Original drawing by Make Bespoke Studio from the sources named in the table.

SPECIFICATION WORDING

PLATED HARDWARE OR FITTINGS

[Element]: base metal [solid brass CW508L / stainless steel grade / steel], not [zinc alloy]. Finish: electroplated [nickel and chromium] to [BS EN ISO 1456, edition to be confirmed], service condition [__], minimum thickness [__] micrometres nickel and [__] micrometres chromium, certified by the plater with the measurement method and a certificate for each batch. Corrosion test [ISO 9227, __ hours, edition to be confirmed] on a production-representative sample. Colour approved on sample [ref. __].

PVD FINISH

PVD [colour, ref. __] on [stainless steel grade / brass with nickel and chrome underlayer]. Minimum thickness [__] micrometres, certified with the measurement method and a certificate for each batch. Underlayer thickness [__] micrometres certified. Base finish [code] approved before coating. See TL-MET-04 for the full wording.

SOLID INLAY STRIP OR HANDLE

[Element]: solid [brass CW508L], [__] mm thick, unplated and uncoated, finished [satin / polished] to approved sample [ref. __]. Not plated base metal. Allow for re-polishing [__] times without exposing a different material.

EVIDENCE TO BE SUPPLIED

For each plated or coated finish: base metal and grade; each layer and process; minimum thickness per layer with the measurement method and the locations measured; the standard and class; test reports [__]; a worn or abraded sample [ref. __] where the finish will be handled. No service life is implied unless stated by the supplier in writing.

TERMS USED

Micrometre (micron, µm)

One thousandth of a millimetre. Decorative PVD is published at 0.2 to 2.0 micrometres thick.

Electroplating

Depositing a thin metal layer, such as nickel or chromium, onto another metal using an electric current. The layer is thin, so what lies beneath matters.

Substrate

The metal being coated or plated. It decides what happens when the finish wears through.

Polish-through

The point where a thin finish has worn away at a touch point and the layer beneath shows.

Anodising

An electrochemical process that thickens the natural oxide on aluminium. The film is part of the metal's surface, and its classes are named by thickness in micrometres.

STANDARDS AND SOURCES

- A coating manufacturer's decorative PVD datasheet: 0.2 to 2.0 micrometres, 1,500 to 2,800 HV; brass, aluminium, zinc die-cast and ABS need nickel and chrome plating first; read 5 November 2026.
- Euro Inox, Colouring Stainless Steel (Materials and Applications Series, Vol. 16, 2011): electrochemical film 0.02 to 0.36 micrometres; PVD typically about 0.3 micrometres; not repairable; BSSA-hosted.
- Galvanizers Association: EN ISO 1461 coating thicknesses (2022 edition): local and mean minimum thickness by steel thickness.
- Canadian Conservation Institute, CCI Notes 9/3 (2007): polishing is abrasive and removes some surface metal.
- A lacquer maker's data sheet; a hinge maker's finish key; a UK supplier's anodising article: lacquer film thickness; brass-electroplate finish codes; anodising classes (secondary).
- BS EN ISO 1456, BS EN ISO 7599:2018, BS EN 1670, ISO 9227, EN 1811: named, not read: confirm the current editions.

Full guide: https://makebespoke.com/trade/technical/plating-and-coating-thickness. 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.