

Introduction to the materials used on Chant door hardware.

Chant door hardware is predominantly made from brass and bronze as the base metal. The technical and practical reasons for the materials we use, and why are;

- They are highly castable, machineable, stable metals with excellent corrosion resistance and with excellent finishing properties. This allows us to make many intricate and diverse products with a high level of customisation when necessary.
- Can be finished in "as colour" and "Living" finishes for long lasting, "it is what it is", virtually maintenance free products.
- The brass readily accepts a variety of electroplated finishing processes to suit many décor and customer requirements. While some people may view electroplating as environmentally undesirable, the contractors that we use must meet strict environmental guidelines for their processes.
- These metals and the extensive range of products that we make, allow them to be used and colour matched throughout a project, from the front to back door, and everything in between.
- They have a long service life, are repairable and recyclable.
- Brass, and particularly the bronze alloys up to 100% copper, have strong antimicrobial properties. Conclusive testing has proven this feature. Bugs have a life span of minutes to hours on these metals against surviving on stainless steel for hours to days. Visit www.copper.org/antimicrobial/ for the antimicrobial properties of copper based alloys. Interesting reading!

Brass

The brass components are made from extruded brass bar stock which includes rounds, squares and flats; brass sheet, forgings and castings. The metal that we use for the brass castings, is an alloy, HTB1, or High Tensile Brass from the British Specification, BS1400. It has a chemical composition of approximately 59% copper, 36.5% zinc, and the balance in other elements of tin, manganese, iron, aluminium and nickel. This alloy, while close to a standard 60:40 brass, has a standard yellow brass colour, is a much more stable metal when being cast, provides high quality castings with almost zero reject rates, and are stronger and tougher than standard brass.

This range of brass is used for our polished brass, weathered brass and all of our electroplated finishes.

Bronze

This is a wonderful material that has been around for a year or two, in fact since before the Roman times. Artefacts thousands of years old are still in existence, although do not generally look as good as they did on day one!

Our bronze components are made from a universal grade, LG2, or Leaded Gun Metal. This metal has a composition of 85% copper, 5% tin, 5% zinc and 5% lead. It has very good casting qualities and excellent finishing properties. It is a metal that can only be produced as castings in standard foundry practices, or from continuous cast bar stock, in a variety of sizes. It is not available in sheet or extruded form.

Our castings are produced in either the green sand process for the smaller castings in conventional casting boxes, which are able to be physically handled by foundry men, or a hard

sand process for the large castings which are beyond practical physical manhandling.

Material Origin and Recycling

Our castings and components in both of the materials above, are made from recycled scrap. Our finished products are also totally recyclable. Designed so they can be easily disassembled, refurbished through stripping of electroplated finishes, repolishing and re electroplating into the same or alternative finishes, or totally reprocessed back into new castings. They are materials that fit into the "Cradle To Cradle" definition.

Stainless Steel

The rust inhibiting elements in stainless steel is nickel and chromium. The 316 Grade, generally termed a marine grade, has higher percentages of these two elements, but also has molybdenum to improve its corrosion resistance over 304 Grade. To avoid, or at least minimise rust spotting or "tea staining" as it is commonly known, products must be produced in 316 Grade as a minimum for external hardware.

Our mortise locks in the "Locks Section" have their face plates, cases and strikes made in 316 Grade Stainless Steel. We also offer them in some electroplated finishes, on the stainless steel, including Brass Plate, that can be aged to match Weathered Brass and Bronze.

The "Line 316" Handles are designed as a totally fabricated range of handles with close pillar to handle joints. This prevents any complications to the parent metal from contamination of welded joint construction. We use 316 Stainless Steel on these handles for lengths over 1200mm, which are beyond the practical lengths for electroplating. See Chant Handle Section for full details of this product range.

Our extensive range of sculptured and machined pull and lever handles, and accessories, and the customisation that we provide, does not allow for production in stainless steel. Using brass as the base metal with electroplated finishes provides many finish options. Or for maintenance free, surface finishes, opt for the "Living Finishes" in the brass and bronze metals.

Other Metals

Our reasons for NOT using some other metals commonly used in door hardware;

Zinc Die Cast. This material has a limited service life, particularly in the outdoors with electroplated finishes. This material, and products made from it are not generally economically repairable, and there is often a lack of complimentary hardware in similar colour shading or finishes.

Aluminium. Generally a softer material that may mark more readily than brass and bronze base metals. There is also a limited range of colour matching accessories.

For full details of the finishes that we offer, refer to the following pages.

Electroplated Finishes on Brass as the Base Metal

These colours are indicative only, subject to limitations in the printing process.



Polished Chrome Plate/PCP Layers of bright nickel and chrome on a polished surface.



Satin Chrome Plate Velvet/SCPV Layers of satin nickel and chrome on a polished surface.



Satin Chrome Plate Brushed/SCPB Layers of bright nickel and chrome on a brushed surface. This finish is not recommended for marine or corrosive atmosphere situations.



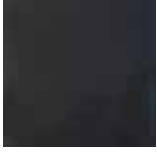
Chrome Pearl/CP Layers of satin chrome on a textured surface.



Sand Polished Chrome/SPC This is a shot blasted finish providing a textured surface, which is then polished chrome plated.



Black Chrome/BC A durable, deep black, polished black chrome finish.



Satin Black Chrome/SBC A durable, satin black chrome finish.



Satin Chrome Stipple/SCST



Polished Brass Stipple/PBST



Weathered Brass Stipple/WBST

Stipple Finish

This is a peining process that is applied to the surface of the metal to provide a rustic feel and appearance to the hardware.

The surface can then be electroplated or aged in our various finishes to complement particular decor styles.

As these finishes have an artistic and creative element to them, it is essential to discuss with your Distributor or Chant.

Original finish

Examples of natural patinas which occur over time



Brass Base Metal and “Living” or “Patina” Finishes through Electroplating of the Brass.

Note: Shade variations may occur during manufacture and in matching new hardware to existing products already in use.

Copper Plate/COP A thick copper layer plated onto the brass base metal, left uncoated, which will acquire a rich red-brown patina over time.

Weathered Copper/WCOP A thick copper layer plated onto the brass base metal, then bead blasted and ‘aged’ to a matt red-brown colour, which will continue to evolve a natural patina over time.

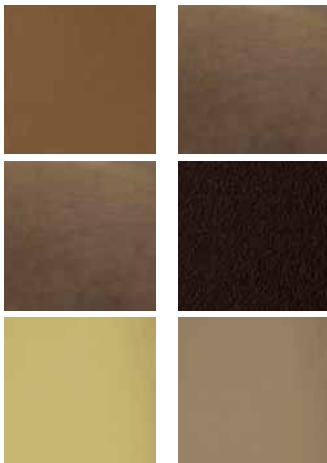
Satin Nickel Plate/SNP A layer of satin nickel on a polished surface. It will oxidise to a minor degree over time, please refer to additional information on the following page.

Polished Nickel Plate/PNP A layer of nickel on a polished surface. This may oxidise slightly over time depending on atmospheric conditions.

Nickel Pearl/NP A layer of satin nickel on a textured surface.

Original finish

Examples of natural patinas which occur over time



Brass Base Metal and “Living” or “Patina” Finishes through Oxidisation of the Brass.

Note: Shade variations may occur during manufacture and in matching new hardware to existing products already in use.

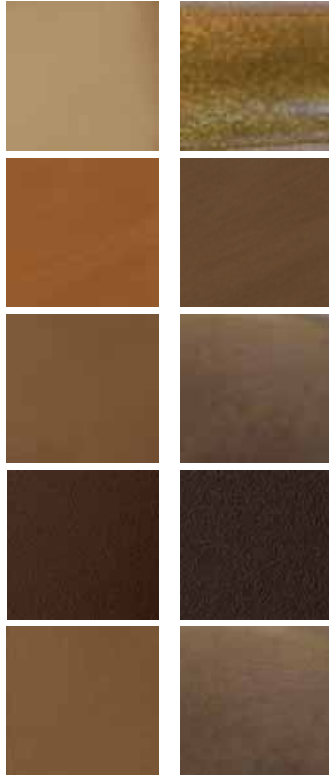
Weathered Brass/WB A bead blasted surface on brass, then aged to provide a light, matt brass surface. The colour of this finish will also continue to evolve over time.

Weathered Brass Dark/WBD A bead blasted surface on brass, then aged to provide a dark, matt brass surface. The colour of this finish will also continue to evolve over time.

Polished Brass Uncoated/PBU This will need polishing with proprietary metal cleaners to maintain the surface, or left to age naturally to a yellow-brown patina.

Original finish

Examples of natural patinas which occur over time



Bronze Base Metal and “Living” or “Patina” Finishes through Oxidisation of the Bronze.

Note: Shade variations may occur during manufacture and in matching new hardware to existing products already in use.

Polished Bronze/PBZ This will age naturally and develop its own patina over time depending on the prevailing climatic conditions and wear patterns with use. The ultimate finish will be a rich semi-gloss bronze patina surface, often showing the random grain structure of the bronze.

Satin Bronze Aged/SBZA The surface is satin finished by brushing and aged to provide a dark matt bronze surface. The colour of this finish will, over time, adjust to its own natural satin patina depending on the prevailing climatic conditions and wear patterns with use.

Weathered Bronze/WBZ A bead blasted surface on bronze, then aged to provide a light, matt bronze surface. The colour of this finish will also continue to evolve over time.

Weathered Bronze Dark/WBZD A bead blasted surface on bronze, then aged to provide a dark, matt bronze surface. The colour of this finish will also continue to evolve over time.

Sand Bronze Aged/SABA A shot blasted surface on bronze, then aged to provide a matt bronze, textured surface. The colour of this finish will also evolve over time.

Brass and Bronze Base Metal “Living” Finishes.

All of our door handles are made of brass as the base metal and is used for the electroplated finishes, including copper. Our door handles are also available in bronze as the base metal, for Polished Bronze and the Bronze Living finishes.

Uncoated brass, copper and bronze are used where the beauty of polished, natural, or patina finishes are required to complement or enhance the decor.

They are subject to colour change over time depending upon;

- Atmospheric conditions present, which can vary from low corrosion indoors, non coastal; to high corrosion, exterior, in coastal areas with salt laden air.
- Wear patterns with use, from little used ornamental handles to high use handles. Greater use may wear the surface finishes back and provide contrasting patina and semi polished surfaces.

Combinations of the above factors, in varying degrees will provide unique and “Living” Finishes. These finishes as specified are therefore not guaranteed for colour fastness.

Satin Nickel Plate is included in the “Living” Finishes group. It will oxidise to a minor degree over time, as it is a metal.

Because of its colour, it is often the preferred match for hardware on natural finish wood doors and windows over other electroplated finishes like satin chrome plate. This natural ageing is deemed desirable in some markets. We do not lacquer this finish to protect it from oxidising as often other brand products do. This is because lacquers will ultimately fail with use, through abrasion and chipping of the surface, and look inferior to a naturally ageing finish over the complete product.

Products in the “Living” Finishes group can also be maintained as polished surfaces with standard proprietary metal polish cleaners.

To maintain “Patina” surfaces we recommend cleaning with a mild soap and water, do not use abrasive or chemical based cleaners. A high quality wax can be applied to protect both “Patina” and “Living” Finishes.

Locks used in our Accessories Section i.e. Sliding Door Locks etc have brass face plates and can be finished with our electroplated and “Living” Finishes.

Our Mortise Locks in the 1000 Group in the Locks Section are made of stainless steel and the finish options are detailed there.