



# MATERIAL DATA SHEET

## For Specifiers and Trades

### Product Description

The LMT metal finishes are a range of liquid metal coatings applied by variety of tools to create different textures and finishes. We use real semi-precious metal coatings from LIQMET which were developed to bond on to substrates such as MDF, timber, steel, plaster, polyurethane foam, fiberglass, concrete, plasterboard, aluminium, paper, paper Mache, plastic and fabric without causing heat damage to the substrate. There are many applications for metal finishes but many people find sheet metal either too expensive or restrictive in application (eg can't coat a figurine). Our metal finishes provide a joint free metal surface that looks like solid metal with an application only 0.5mm thick and expands both the design and construction potential of any substrate by lending it the appearance of solid metal without any of the restrictions, such as weight and cost.

Our manufacturing technique allows us to offer in excess of 800 finishes, ranging from mirror shiny to brush-applied 3D textures, which create stunning effects to panels and architectural pieces.

These finishes make LMT a perfect solution for a wide range of bespoke architectural projects (eg chandeliers, statues, and furniture), interior finishing (eg, kitchens, bathrooms), and exterior finishing (eg cladding, garage doors, fences, landscape design) for any design and/or building projects.

There are 18 colours available such as Bronze, Brass, Copper, Iron, Aluminium, Zinc, Pewter, Antique Bronze, Antique Copper, Antique Bronze, Tahiti, Aqualloy, Rose alloy, Platinum, Gold, Graphite, Gunmetal and Smoked Chrome in various textures and patinas including Natural Green patina, Florentine, brown Florentine and Pearl, Rust and Orange Rust.

We have a fire-retardant range which includes all 18 metals and the same textures as in a standard range.

A guide to specifying LMT metal finishes is shown on page 5 which shows available textures, patina and topcoat.

The organic nature of the metal coating and aging process enables an intended inconsistency in the panels, just as the material would do naturally if left for several years. It also works well in high traffic areas as the varied surface helps disguise marks such as fingerprints, all metals are offered with a topcoat for further protection. LMT offers to coat all metals with a matt, semi-gloss or gloss clear top coating. This top coat application stop a patina from further ageing.

## **General Surface Preparation**

It is recommended that the highest quality substrate be used at all times. LMT are not always able to determine the quality of a product when it is delivered to us however if it is obvious we will bring it to your attention before we commence work.

We will prepare all surfaces for the metal application. However, there are some necessarily preparation must be done by the client:

- Surfaces to be coated must be in their raw state (no paint, varnishes etc. and must be dry and free of oils, rust or scale).
- Surfaces should also be kept clean and free from any contaminants that could affect the metal.
- Use fillers recommended for particular materials. Do not use oil based putties or fillers. Imperfections in surfaces caused by jointing, fixings and mechanical damage will copy into the finished surface unless carefully repaired. LMT metals will penetrate into fixing holes, which should have adequate clearance or be redrilled after the metal is applied.
- Components should be sized to allow for the thickness of the metal, approx 0.5 -1 mm smooth finishes and up to 3mm for textured finishes.
- A door must be preinstalled prior delivering to LMT factory.
- Indicate areas to be painted.

LMT metal finishes are applied by hand, the completed surface cannot be entirely uniform. These small irregularities add to the natural and authentic appearance of the metal to make it unique.

## **Cutting**

Cutting of panels must be done prior to the metal treatment to avoid leaving a raw and unsealed edge. Cutting down of panels after metal application can lead to the chipping of the surface coat. Cutting after treatment will leave the panel with an exposed and uncoated edge which can lead to shearing.

Please note any cutting after treatment is not recommended and will void the warranty.

## **Foot Traffic**

LMT metal finishes can be used in trafficable applications, however textured coatings are recommended to minimise visible wear and tear. Light to medium scratches from hard abrasive objects are likely be seen.

## **Durability**

The physical and chemical tests indicate the coatings have excellent impact resistance, high water pressure washing and very good chemical resistance to the more popular household cleansers.

## **Maintenance**

LMT metal surfaces should be cleaned following the instructions below, as required, to prevent accumulation of atmospheric fall out such as dirt, dust, grease and salt residue and ensure the optimum decorative life of the product is achieved.

Materials may also be affected where the coating is subject to, but not limited to the following: water pooling, harsh climatic conditions, direct western sunlight, and exposure to salt water, water immersion and high pollution levels. Please note surfaces close to salt water will generally require a more regular cleaning cycle to prevent premature aging or break down of the top coat. It is recommended to clean metal surfaces exposed to these conditions at least monthly.

- Wet cleaning with soft cloth.
- Kitchen cleaning detergents can be used except abrasive ones.
- No dry cleaning (to avoid the scratches).
- No thinners such as Wax removers, acetone, turpentine, etc.
- To refresh the surface, any furniture or car protective waxes as "Mr. Sheen" or similar are recommended.

Aging – Unsealed metal surfaces with patina will continue to grow over time. It can be easily cleaned off with very fine steel wool, note the longer the aging is present the more difficult it will be to remove. If preferred, the surface can be treated by LMT with a topcoat to stop further growth.

All items to be coated should be delivered in good condition. Dents, machining marks, and other inherent issues with any supplied panels will most likely be present in the finished product and may even be highlighted via the aging process. LMT will contact the client where possible if a defect is identified prior to treatment.

If the client has a sample they would like LMT to match to they must provide the sample at the time of order, and all work will be carried out to match as best as possible. Custom patination of metals must be performed with the direction of an approved sample.

## **Lead Times**

Our usual lead time is 2-3 weeks. However this may increase for large or intricate surfaces, or depend upon the existing factory workload. Please confirm lead times prior to delivery of work.

## **Fire rating tests**

Following tests have been passed: heat release, smoke release, ignitability spread of flame and heat evolved smoke development. Our fire retardant metal finishes passed the test – 5min straight flame test.

## **Chemical resistance**

12 hrs of concentrated exposure to common household chemicals - no effect to Liquid Metals.

## **Impact resistance**

The coating has excellent impact resistance.

## **Waterproof test**

Under cyclic heat, humidity and rain no form of film degradation, no film breakdown, only small surface oxidisation that can be removed with steel wool.

## **Full Weather Resistant**

25 year immersion, sun, UV and Salt spray test.

## **Requirements for Substrates**

LMT recommends for outdoor use – Masonite. For front doors – timber doors with Masonite on both sides.

Sheet metal - The minimum thickness recommended for the metal substrate is approximately 3mm. Sheet metals can be supplied raw.

Concrete and Plaster Cast - Pieces should be produced from moulds free of oil and release agents.

Fiberglass - Wash down surfaces with acetone then sand to a non-glossy surface using 120-grade sandpaper.

Plastics - Surface should be heavily scoured or sanded to obtain greater bonding.

## **Preparation**

The recommended preparation of metal substrates varies based on the application (I.e internal or external). Preparation between the base material and the LMT metal finish is often required to remove risk of chemical reaction; metals can naturally react with one another when the different alloys come into contact. Failure of doing the preparation will directly affect our warranty. If the surface prepared according our recommendation LMT provides 25 years warranty.

**Disclaimer:** The information presented herein is supplied as a guide to those who handle, install or use this product. It is important that the end user makes a determination regarding the safety procedures utilised during use of this product and ensure they are adequate. Our application of written or spoken technical recommendations that we use to support the buyer/processor is based on our experience, according to the current state of knowledge in science and practice and are not binding and shall not establish a legally valid contractual relationship, and no additional obligations under the purchase contract. Since the use of this product is beyond our control we cannot be held responsible for product field performance.

METALS AND ALLOYS	TEXTURES												PATINA				TOPCOAT					
	RETRO	CORAL	SHINY	MODERN	VOLCANO	SUPREME	SUBLIME	ALTERNATIVE	LINISH	OLD CAST	CLASSIC	FUSION	FLORENTINE	NATURAL GREEN	RUST	BROWN FLORENTINE	PEARL	MATT	SEMI-GLOSS	GLOSS	WAX	UNSEALED
Aluminium	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x
Antique Brass	x	x	x	x	x	x	x	x	x	x	x	x		x				x	x	x	x	x
Antique Bronze	x	x	x	x	x	x	x	x	x	x	x	x		x				x	x	x	x	x
Antique Copper	x	x	x	x	x	x	x	x	x	x	x	x		x				x	x	x	x	x
Aqualloy	x	x	x	x	x	x	x	x	x	x	x	x			x			x	x	x	x	x
Brass	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Bronze	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Copper	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Gold	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
Graphite	x	x	x	x	x	x	x	x	x	x	x	x						x	x	x	x	x
Gunmetal	x	x	x	x	x	x	x	x	x	x	x				x			x	x	x	x	x
Iron	x	x	x	x	x	x	x	x	x	x	x			x				x	x	x	x	x
Pewter	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	x	x	x	x
Platinum	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	x	x	x	x
Rose alloy	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	x	x	x	x
Smoked Chrome	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	x	x	x	x
Tahiti	x	x	x	x	x	x	x	x	x	x	x	x			x			x	x	x	x	x
Zinc	x	x	x	x	x	x	x	x	x	x	x	x	x		x			x	x	x	x	x
Gunmetal	x	x	x	x	x	x	x	x	x	x	x	x		x								

PLEASE NOTE:

1. Linish direction is should be specified by a client
2. Anti Graffiti topcoat is always high gloss
3. Iron and Gunmetal are available in Orange rust

HOW TO ORDER SAMPLE

Please refer to the above table and send the request to [sales@lmt.net.au](mailto:sales@lmt.net.au).

FOR SPECIFICATION

When you specify our metal finish please provide following information:

Manufacturer: Liquid Metal Technologies P/L (LMT)

Metal:

Texture:

Patina:

Topcoat: