



Liquid Metal Application Guide

Instructions
Technical Data

SAFETY FIRST KEEP OUT OF REACH OF CHILDREN. AVOID EYE CONTACT. SEEK IMMEDIATE MEDICAL ATTENTION IF INGESTED OR EXPOSED TO EYES. AVOID PROLONGED EXPOSURE TO SKIN. WEAR SAFETY GOGGLES AND GLOVES WHEN WORKING WITH PLASTER. WEAR OSHA APPROVED RESPIRATOR WHEN WORKING WITH DRY MIXES OR WHEN SANDING PLASTER. FOR MSDS (MATERIAL SAFETY DATA SHEET), VISIT SHOP.5STARFINISHES.CA

GENERAL

Liquid Metal is used to create genuine metal coatings that look, react and feel just like real sheets of steel, iron, copper etc. All of our metal powders are genuine and can receive stains, patina and oxidations etc and are applied with a revolutionary and proprietary binder technology that allows for easy application via Venetian plaster trowels without the need for any sanding to produce shine. Our proprietary water based burnishing binder will allow for the liquid metal plaster to burnish like our other Venetian Plasters and polish to a glass shine. This can save 100s of hours of sanding trying to produce a shine and allows you to apply large amounts of our product finishing projects quickly and with better results.

Designed for interior surfaces. Not recommended for floors or countertops. In the future some metals may be recommended for Microcement shower topcoats which are in the works.

Do not use Zinc around very warm surfaces like a wood burning or non zero clearance fireplace as it has a very low burning temperature compared to our others.

We do not offer Aluminum as it reacts under certain conditions with our binder and water to produce aluminum hydroxide and cannot be stable for more than a few days once mixed. Aluminum is also very soft and not an ideal coating in our eyes.

Liquid Metal comes as a two-component kit, with one component containing the metal powder, and a second component containing the binder with our ultra performance proprietary blend of binders, rheology agents, and polishing compounds. The Liquid metal mixture is water variable, and allows you to add water after adding the binder to the metal powder to create a thinner or thicker mix depending on application style.

COVERAGE

Depending on surface conditions and desired application texture, 5kg of liquid metal will cover 60-100 sq ft.

APPLICATION

Use a flexible basecoat trowel, spatula, Bianka or Anima trowel to apply the first layer of Liquid metal and a Bianka or Anima trowel for the topcoat.

SUITABLE APPLICABLE SURFACES

Apply Liquid Metal over substrates that are clean, cohesive, free of contamination and as follows:

Gypsum Drywall: (Interiors Only) Drywall should be taped and smoothed to a level 4 finish. Use our Quartz primer watered down 30% over new drywall to help seal and consolidate the surface. Then apply a second layer of Quartz primer without adding any extra water to provide a surface that will provide a permanent bond to our plasters and perfect junction between drywall and plaster. Standard PVA primer can also be used if a painting company is coming in before you. You can apply only one coat of quartz primer. Let dry at least 1 hour prior to application or until dry to the touch.

Existing painted substrates: Always prime first with a recommended primer. If the surface is oil based or glossy, use a high adherence primer for bonding to difficult surfaces. Then apply one coat of our quartz primer prior to application and let dry at least 1 hour or until dry to touch.

Existing texture It is recommended to remove the texture via sanding or grinding, or to cover it up first with drywall compound etc to ensure a smooth and problem free substrate. Then prime with our quartz primer with 30% water, and one coat of quartz without adding extra water. Under certain circumstances you could cover existing texture with our coarse concrete-look and or 2+ coats of our basecoat plaster.

Preparatory work: Mask and protect adjacent surfaces and remove any dust from surface, especially after sanding. Mask about 1 mm from adjacent surface or trim to allow for thickness of plaster. Always protect floors and surrounding areas as plaster does drop and the sand will scratch any floors etc as you walk.

PRODUCT PREPARATION All surfaces must have even absorption rates for the final appearance to look uniform. It is crucial to ensure the correct primer is used and to not try and cover over drywall or cement stucco with our product that has not been primed.

Never use more than one wet mix for an entire wall surface, as the color and amounts of water used for the mix will not match perfectly. Never mix water into the Liquid metal plaster if its thicker during application as this will cause the plaster to have a different appearance. Doing this will cause the material to dry to a different color. You must mix only what is needed and mix the entire material using some extra water at the start of the final application layer. If you require 40kg of liquid metal for a large wall, then use a large container and mix it all at once with water and binder to ensure its mixed with the same proportions. Never spray water over the setting product as your working on the wall, as this also will cause staining and lighter and darker areas that are inconsistent with the natural look of the metal. It is not bad practice to spray with water however, and this technique can be used if the sample board reflects this finish prior to install. Keep in mind any extra water being applied can cause more rust to appear, ie on our iron.

This plaster will not harden in the bucket, and can be used for some time. Antique bronze, Iron and Copper are the most likely to rust and oxidize in the mix of water and can only be kept for a week or two before they start to change colors. Allowing the metals to age in the mixture can produce very beautiful finishes with mixtures of oxidation mixed in.

PRODUCT APPLICATION

First Coat: Liquid Metal should be applied at grain size, covering the entire wall. Allow at least 12 hours for the first coat to dry. All areas should be one color with no darker sections that are wet to the touch.

Second Coat: Apply the second coat working in small sections, either right to left for left handed people, or left to right for right handed, so that you are always working into a wet edge. Apply the plaster as per the system developed in your sample board, and as the plaster dries, you can lightly sponge it, compress with the edge of the plaster trowel, and or use the face of the trowel for a different style of compression, creating more higher and lower spots of varying colors. Be careful using the face of the trowel as darkening of the plaster occurs very quickly. The very front nose of the Bianka trowel works really well for polishing, and or the side edge can be rubbed with firm pressure back and forth continuously over the dry plaster. The liquid metal polished the most once its fully cured, but should be delicately polished while still a little wet to produce an initial shine.

Polished finish: On the last coat as the plaster dries to a clay like dryness, burnish plaster with edge of trowel obtaining a high polish. For this style of application put the plaster on tight working in small sections and keep coming back to the areas as they dry more and polish with the edge of the trowel. You only want to use Bianka trowel or Anima trowel for application and polishing on the second layer as the regular trowels will darken the metals considerably. The liquid metals polish even more once fully dry, and can be burnished considerable more the following day before adding any sealers or oxidations, patina etc

Matte finish: As the final coat is drying, very gently compress the finish with a Bianka or plastic trowel, and do not burnish much just as you would with a venetian plaster finish. Apply the coating a little heavier and with less pressure as you apply to create a less shiny appearance.

Rocky finish: Very soon after applying the second coat work in section and stamp extra plaster all over the surface leaving a rocky looking effect. Let this dry until firm enough to smooth down leaving the textured surface, knocking down all the raised edges to produce a smooth surface. Let dry until almost 75% dry and proceed to burnish until all the raised texture is compressed, shiny, and a little darker in color.

Old world finish: Apply the second coat leaving certain areas open and not covering the base coat entirely. At the same time, you can also come back over this coat and leave some opening again over the new plaster, creating a double layer of rips. Stamp extra plaster onto the walls with the face of trowel covered in a thin layer of plaster, and finally use a rigatto tool to drag and create cuts and swirls in the final finish. As the final layers are drying, compress with the face of the trowel to darken raised edges and create the final finish for your walls. The more wet the plaster is and the more you rub with the face of the trowel, the darker these areas will become. You can also allow it to dry to around 75% and burnished with edge of trowel.

Pitted and Roller Stamp finish: Working in sections apply a thick coat of plaster that is a little thicker than grain size, and then roll the pitted roller, or texture stamp rollers over the surface to create your patterned look.

Top coats: Liquid metals can all receive our oil based wax as a shiny sealer and be polished to a high shine, or left more natural looking using our oil based penetrating sealer which makes the product extremely waterproof without any coating. You can also seal our liquid metal with Poly seal diluted 75% water to poly seal, then 50-50, and if desired a final layer of poly seal undiluted and troweled smooth as you apply it with a roller in small sections.

Colorants: Liquid metal is best left natural creating unique colors by mixing the various shades of metals together for new shades or blending on the wall as two unique colors during your final application.

Delivery, Storage and Handling: Keep materials away from direct sunlight. Store them in original, unopened packages in a dry, dark location at temperatures between 45 and 95 degrees F. Always wear OSHA-compliant eye protection. Wear a respirator to mix, sand or scrape the product. Work only in well ventilated areas. Avoid prolonged skin contact. Avoid working with the material in temperatures below 41 degrees F or above 96 degrees F. Keep away from children. Do not use products older than one year. Always test an older product before use to ensure its quality. Read the entire MSDS and product labels.

Cleaning: Use a dry cloth to remove dust and loose dirt from surfaces, then wipe them with a clean damp cloth as needed. Mild detergents or proprietary cleaning agents may also be used. Scrub gently. Solvents such as acetone should not be used but mineral spirits can be a good option. Clean vertical surfaces moving upward from the bottom. Use a damp rag followed by a dry rag to remove any remaining cleaning agents. Find a small, inconspicuous portion of the surface to test cleaning products and methods before applying them to a wider area. Follow the manufacturer's package label instructions.

Do not use acidic cleaners, bleach or CLR style cleaning agents, as they will damage the plaster or any harsh basic cleaners etc.

Blemishes: You can sand with high grit sandpaper or steel wool to try and remove any small stain. Find a small, inconspicuous portion of the surface to test these techniques. Reapply sealer and/or wax to sanded areas as necessary.

Mixing: Pour the liquid metal binder into the metal powders container and then slowly mix and add water as required to produce the thickness of mixture you desire.

You should use a high speed drill, such as a Makita hammer drill that has a max RPM of 2000. If you use a mixing spade to get the initial mix together, then always use a higher rpm hammer drill after as this faster speed allow for a vortex to be created and ensures a uniform mix. The plaster will not mix entirely without a higher RPM drill.

Pot life: This product will not set and can be mixed ahead of time and be stored after use. Some of the metals will begin to rust, patina or oxidize if left mixed for more than a few days.

Technical Advice for Hood ranges, Fireplaces, Hearth etc: For hood range applications it is best to always apply one layer of our hydraulic lime Ultra fine in at least one if not two layers to produce a strong solidified surface. Hood range should always be built from drywall and finished to a level 4 finish. Once the basecoats have dried for 12 hrs min, apply one layer of poly seal 50-50 with water to consolidate and isolate the lime from the new metallic coating. Then apply one layer of Liquid metal and allow to dry 8 hrs before applying second layer of liquid metal plaster. I recommend wax or poly seal for hood ranges as the best options. If you are waxing the hood range its best to seal first with our oil based penetrating sealer followed by two layers of wax.

Fireplaces: For zero clearance fireplaces, you can finish the entire area with drywall and bring it to a level 4 paintable finished with drywall compounds. Apply two layers of quartz primer with the first layer diluted 50-50 with water and then finally one layer of quartz undiluted. You can then choose to apply our eifs mesh around the opening without overlapping and install two layers of hydraulic lime basecoat fine, followed by one layer of Poly seal 50-50 once it has full dried. You can seal fireplaces with poly seal or oil based penetrating sealer. I don't tend to use wax on fireplaces for plaster finishes or liquid metal.

Non-Zero clearance fireplaces or Wood burning: use hardi board around any hot areas and drywall for the rest of the fireplace and finish using only metal drywall beads and concrete fill for around wood burning and pro-set 60 for non-zero clearance gas fireplaces. Do not use multi purpose premixed drywall compounds. Follow this with again the eifs mesh, hydraulic lime basecoats etc as outlined above. **DO NOT USE ZINC NEAR ANY HOT SURFACES AS IT'S OUR ONLY METAL THAT CAN EASILY BURN AT LOWER TEMPERATURES.**

Liquid metal Oxidations etc: The next day you can apply our rust agent to rust iron, and the blue or green patina solution for copper. You can spray these, sponge them, or apply in any way imaginable to create the effects you desire. Metals can also be stained with metal stains, metal patinas, waxes etc all available from many shops online if your wanting to research more into the world of metal patinas. For any products that are oxidized with a solution it would be recommended to apply a topical wax or sealer of poly seal as a penetrating sealer will not lock in the rust etc and stop the product from continuing to

oxidize. Any metals can be left natural without a sealer to age and patina on their over time as real metal would.

To order materials, find more tech information and install ideas please visit WWW.5STARFINISHES.CA.

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