

## Instructions for coating Unpainted or Bare Metals with Everbrite™ or ProtectaClear®

**Suggested Project Use:** Uncoated copper, silver, brass, bronze, gold-plate, stainless steel, steel, chrome, bare aluminium (not anodized) and any non-painted metals.

ProtectaClear® is required for Stainless Steel, highly or mirror polished surfaces, items that get a lot of use and abuse, and food safe items. For instance, jewellery, sinks, counter/bar tops, appliances, flatware, stainless steel, polished brass, wheels, walkable surfaces, hardware and high-use hand rails.

Everbrite™ is recommended for copper roofs and awnings as well as any project where ProtectaClear® is not needed.

**\* READ ALL INSTRUCTIONS THOROUGHLY BEFORE STARTING \***

<b>1. Clean/Polish (if needed)</b>	<b>2. Neutralize (if acid used)</b>	<b>3. Rinse well &amp; dry completely</b>	<b>4. Solvent Wipe</b>	<b>5. Apply Coating</b>
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### PREPARATION

**Thorough preparation is very important.** If you try to take shortcuts on preparation, you will likely not achieve the intended results and may need to remove the coating and start again. The article to be coated must be scrupulously clean and completely dry before applying the coating.

#### NEW or METAL WITH PATINA

Skip to the **Solvent Wipe** step below. Solvent will NOT remove most forms of tarnish or patina. Test a small area first.

#### TARNISHED or OXIDIZED METAL

Follow all steps: Polish, Neutralize & Solvent Wipe before applying coating.

#### METALS WITH OLD COATING (DIFFICULT TO CLEAN/POLISH)

If you are having difficulty polishing/cleaning the metal there may be an old coating on the metal preventing this. You will need to remove the old coating with a varnish/lacquer removal (from Hardware Store) before you can polish the metal to the desired finish. After removing the old coating then follow all steps: Polish, Neutralize & Solvent Wipe before applying coating.

### 1. CLEAN OR POLISH

Clean, polish or buff the surface to the lustre desired with any metal polish you prefer (we recommend MAAS Polish, which can be found on our website). The metal can also be sanded or simply cleaned to the desired appearance.

### 2. NEUTRALIZE ACIDS

Note: THIS STEP CAN BE SKIPPED IF USING CLEANERS OR POLISHES THAT ARE NOT ACID BASED. MAAS Polish does not contain acid, however many polishes do. Check ingredient list for any type of acid. If you are unsure, complete this step. Use EZ Prep™ Cleaner & Neutralizer in a solution of 1 part EZ Prep to 4 parts water. As an alternative, use 1 cup baking soda mixed with 4 litres of water (or a similar ratio). Wash the metal with a cloth saturated with the neutralizing solution being careful to cover the entire surface at least once. **Do NOT let the Use EZ Prep™ Cleaner & Neutralizer solution dry on the surface.**

### 3. RINSE WELL & DRY COMPLETELY

Rinse the EZ Prep™ Cleaner & Neutralizer solution off twice with clean water. Dry with a clean cloth to prevent spotting. It is essential that the metal be completely dry before coating. Moisture trapped in the metal can cause white or yellowish spots to appear under the coating. Warming the metal with heat guns, hair dryers, or extra time in warm sunny breezy weather will help moisture evaporate. Let the surface cool before solvent wiping and applying the coating. The surface can be warm but not hot.

### 4. SOLVENT WIPE

Solvent wipe the metal with xylene, a xylene substitute, methylated spirits or acetone to remove any traces of residue and to help dry the surface. If using acetone, be careful. Acetone is a strong solvent - take caution near any painted surfaces. The solvents dry quickly and help to remove moisture from the metal. This step needs to be done immediately before coating. Do NOT dilute or rinse the solvent. This step will ensure a completely clean and dry surface. **Skipping this step will result in poor adhesion of the coating.** (Solvent is not included in kits – available at hardware stores)

### Coating Preparation

- **Natural Gloss:** There is NO requirement to stir clear natural gloss coating.
- **Satin Finish:** You MUST stir satin finish coating well for **5 to 10 minutes** before applying because the flattening agent in the coating will have settled. Failure to stir thoroughly before you start and frequently while applying the satin coating may result in an uneven streaky finish.
- **Do NOT shake the cans** to avoid bubbles appearing in the coating.
- **Do NOT thin the coatings** with any type of solvent as the coatings will fail.
- Pour some of the coating into a clean, dry, metal or glass container. If you are using a standard plastic vessel like an ice cream container, or plastic roller tray then you must line it with two layers of aluminium foil as the coating will melt the plastic if left to dwell inside it.

**Personal Protection:** Allow for adequate ventilation. Only use nitrile powder-free gloves or chemical resistant gloves as rubber gloves will become sticky. Wear eye protection. Allow for adequate ventilation. If spraying with an HVLP or airless sprayer, a NIOSH respirator is recommended.

### PREPARATION TIPS

**USE GLOVES TO AVOID FINGERPRINTS** After cleaning, use nitrile powder-free gloves during handling to protect the surface from fingerprints and avoid problems later.

**REMOVE FILMS, OILS, WAXES & SILICONE** These can interfere with adhesion or cause separation. They need to be removed completely. Most waxes can be removed with ammonia. Silicone is a common coating agent which can be removed with mineral spirits (mineral turpentine) available at hardware stores). Once removed, complete Step 3 Solvent Wipe with Methylated Spirits

**IF MOULD IS PRESENT** Before any cleaning, wet the surface with water. Apply a bleach solution of 1 part bleach to 4 parts water.

**POLISH WITH MAAS** We recommend MAAS Polish, a non-acidic polish that does not require neutralization.

**NEUTRALIZING ACIDS IS CRITICAL** It is very important to neutralize any acid from polishes, cleaners, or chemical methods very well before coating. Acids remaining will discolour the metal under the coating or interact with the coating leaving streaks of discolouration. For example, blackening or black streaks on copper are common when not well neutralized. For strong acids, you may need to strengthen the solution. To strengthen the neutralizing solution, use 1 part EZ Prep to 3 parts water. Or 2 cups baking soda to 4 litres of water.

**REMOVE ALL MOISTURE** Porous metals like steel will need to be bone dry before coating. Heat guns, hair dryers, or extra time in the sun will help trapped moisture evaporate.

#### **THE SOLVENT WIPE STEP IS NECESSARY!**

**The solvent wipe is necessary** for best adhesion to ensure a clean dry surface immediately before coating.

**DO NOT USE use isopropyl alcohol nor turps** for solvent wiping as these contain oil.

**TO REMOVE THE METAL INSERT** found in some cans; unscrew the cap and hold the can firmly to prevent spilling.

Use a hammer to lightly tap the handle of a small screwdriver to pierce through the insert, twist slightly, pop it out.



**5. COATING APPLICATION**

The surface to be coated must be scrupulously clean, sterile and bone dry; and had just been solvent wiped immediately before coating application.

• **TEMPERATURE & HUMIDITY MATTERS:**

Coating is best applied in temperatures from 13 - 30 degrees°C and without humidity. The temperature of the metal is more important than the air temperature. Do not apply the coating if the metal is too hot otherwise the coating starts to flash off too quickly and will not have enough time to self-level. The metal is too hot if you cannot place the back of your hand on it for 10 - 15 seconds. If the metal is too cold, warm the metal with a heat gun, hair dryer, or work in the sun or shade appropriately. If the coating sags this indicates that the metal is too cold as it is not flashing off fast enough. Do not apply if the temperature is within 10 degrees of the dew point. You can access dew point information for your area on [weather.com](http://weather.com)

• **APPLICATION METHODS:** The application method used is a matter of personal preference and is project dependent. For narrow profiles use a sponge brush, sponge wedge or compatible synthetic brush as supplied in the kit; or a natural-bristled paint brush. For wider paneled areas use a clear-coat round applicator pad (as supplied in our larger kits) dense microfibre roller, hi density foam roller (suitable for solvent based coatings)

If spraying use an HVLP or Airless paint sprayer with a fine-finish tip. Aerosols (attachment systems) are not recommended for large, flat surfaces but they can be used for intricate items or jewelry chains. Items can also be dipped into the coating and hung to dry.

• **APPLICATION WITH A PAINT BRUSH – For narrow profiles**

Use a good quality natural bristle brush, or a compatible synthetic brush or sponge brush as supplied in the kits. Dip paint brush completely in the coating. Lightly tap the side of the paint brush on the side of the container. The brush should be full of coating but not dripping.

• **APPLICATION WITH A ROUND APPLICATOR PAD – For wide areas, round banisters etc**

Wear a powder-free nitrile glove and submerge the round applicator pad completely in the coating. Gently squeeze the excess from the pad so that it stops dripping but still remains completely saturated. It is important to be saturated as dry areas in the applicator pad will cause streaks.

Apply the coating letting the applicator pad glide smoothly across the surface. Do not press hard. When it starts showing resistance, dip the applicator pad again.

• **GENERAL APPLICATION TIPS:** Do NOT use circular motions to apply the coating. Use a smooth motion and finish each section at a time. Quickly observe for runs, drips, or sagging and simply smooth them out before the coating starts to dry within a couple of minutes.

Let the coating dry completely. It will self-level as it dries. Do NOT overwork the coating. If after a few minutes you see an area you missed, let it dry completely and then coat over the missed area. Wait at least one to two hours between coats or until the previous coat is completely dry.

**Observe the coating while applying:** if the coating separates or does not look completely smooth, STOP; and remove the wet coating with meths immediately. (You will need to use Xylene if the coating has dried) Then re-clean the surface properly. Other chemicals present on the surface can cause separation and need to be removed completely. Then dry the surface completely and solvent wipe again before applying the coating.

• **NUMBER OF COATS:** Everbrite and Protectaclear coatings are self-annealing; meaning the second coat will become part of the first coat. Wait at least one hour between coats or until the previous coat is completely dry. Most projects require two coats, some need more. (See Project Specific Tips)

• **CURE TIME:** The coating is an air dry solvent, so heat and air circulation hastens curing. Under normal circumstances and with good ventilation the coating will be well cured after 4 to 5 days. The coating is delicate until fully cured, which can take up to two weeks. You can shorten cure time by gently heating the coating AFTER it is dry to the touch. Smaller items can be placed in a low temperature oven (60°C - 80°C) for 1 hour and will be cured when cooled.

The coating MUST be fully cured before prolonged contact with other surfaces; e.g. packaging, allowing water to sit on the coated surface, immersing in water or filling fountains, etc. In most cases, dew or rain does not hurt the coating once it is dry for 3 to 4 hours. But do NOT allow pooling water to remain on the surface of the coating for a minimum of two weeks after coating.

• **AFTER CARE:** Do NOT use solvent or citrus based cleaners or abrasives to clean coated metal. Do not use cleaners with petroleum distillates. Suggested Cleaner: Mild dish soap and water.

• **MAINTENANCE & LONGEVITY:** Once coated the coating is easy to maintain. As long as the original coating is still intact, wash the surface with a mild soap and water, dry well, and recoat. It is best to recoat before any tarnish or oxidation is seen or at the first sight of slight colour bleaching. The longevity of the coating (and time between subsequent recoats) is dependent on proper surface preparation, coating application, number and thickness of initial coats, the environment and general use and abuse.

Maintenance - Stainless Steel

Watch for any sign of rust or tea staining, which will indicate that the surface needs recoating. Wash with mild soap and water to remove any dirt out grease. Let dry completely. Use more ProtectaClear to recoat. The new coat will blend to itself and will remove any rust still left on the surface.

**CAUTION - RUBBER & SOFT PLASTICS:**

Our coating will melt rubber and soft plastics. Use nitrile gloves or chemical resistant gloves as rubber gloves will become sticky. Use glass or metal, or line a plastic container with aluminium foil when pouring coating into containers. **Store coating in glass or metal containers only.**

**PROTECT ANY ASPHALT OR CONCRETE:**

Asphalt needs to be protected; the solvent in the coating will harm the asphalt if spilled. It's a good idea to put a tarp down to protect the concrete from being coated. It won't harm concrete but it will cause it to look shiny.

**APPLICATOR TOOL CARE & CLEANING:**

Rollers, sponge brushes and sponge wedges are usually discarded after a project is completed because you cannot clean them successfully with xylene solvent. HOWEVER they will last for a while when wrapped well in aluminium foil to stop them from becoming hard between coats, during breaks or for a few days/weeks between being used. Wrap bristle brushes in foil during breaks too. **Bristle brushes and spray tips are cleaned with Xylene solvent.**

You must NEVER thin the coating with any chemical nor with any solvent. If you do the coating will fail.

**COATING REMOVAL:** The coatings can be removed from unpainted metals with solvents like Xylene or a Xylene substitute or they can be removed mechanically by sanding for larger areas like copper roofs. Small items can be soaked in solvent. Wear personal protection. Wet a cloth or paper towels with the solvent completely. Move the wet cloth over the coated metal with light pressure. Rubbing hard is not advised. When the coating begins to "melt", wipe it up and off of the surface. Repeat until the coating is gone.

Do NOT apply the coating to very cold or to very hot metal surfaces. If the surface is too cold the coating may sag as it will take too long to start to flash off. If the surface is too hot then it will flash off too quickly as it needs time to self-level. Refer "TEMPERATURE & HUMIDITY MATTERS"

**SHELF LIFE OF THE COATING:** Natural gloss coating has an indefinite shelf life if stored in an air tight metal or glass container. Keep any extra coating for touch ups. We recommend cleaning the threads of the lid/cap with denatured alcohol (meths) before reattaching it. The Satin finish coating will settle, eventually becoming hard to mix well due to the flattening agent.

**TEST FIRST:** For large projects test the coating application in a small section before coating the entire project.

**COATING COVERAGE PER COAT FOR SMOOTH METALS**

Kit Names	mL Coating	Square metres
PCK/EBK 120	120	2.3 to 2.5
PCK/EBK 250	250	4.8 to 6.0
PCK/EBK 480	480	9.2 to 11.5
PCK/EBK 960	960	18.4 to 23
PCK/EBK 3840	3,840	75 to 92

**NOTE:** Mild Steels are more porous than smooth metals; and can take up to 50% more coating for the first coat.

**DANGER: COATING IS HARMFUL OR FATAL IF SWALLOWED.**

**FIRST AID** In case of eye contact, flush thoroughly with plenty of water for 15 minutes and get medical attention. Reports have associated repeated and prolonged over-exposure to solvents with damage to health. Intentional misuse by deliberately concentrating and inhaling contents may be harmful or fatal.

**CAUTION** Combustible liquid. Material does not sustain combustion. Do not smoke or use near flame. Use with adequate ventilation. Avoid continuous breathing of vapour/spray and avoid prolonged contact with skin. Wear nitrile gloves and eye protection.

**KEEP OUT OF REACH OF CHILDREN**

Please read and follow all directions and cautions on packaging & Material Safety Data Sheet

## PROJECT SPECIFIC TIPS BEFORE YOU START:

### COPPER:

If there is a high mineral content in the water, use distilled water to avoid discolouration from water mineral components. Copper Cleaning Gel is available for heavily tarnished copper. If using the gel, see the Copper Cleaning Gel directions.

- Copper roofs:  
Polish is not recommended for older tarnished copper roofs due to the roughness of the metal. Polish gets stuck in the rough areas and cannot easily be removed.
- Sinks and water features:  
Avoid pooling water, filling with water, or pouring boiling water in the sink for a minimum of two weeks after coating. Sinks may take longer to cure. A deep sink does not get much air circulation. A hairdryer or heated fan can be used every so often to introduce heat and circulation to the area after it is coated to speed curing.

### STAINLESS STEEL:

Many stainless steel cleaners contain silicone. Silicone residue must be removed before applying the coating. Silicone is a common coating agent which can be removed with mineral spirits (mineral turpentine). The turps must then be cleaned off and then a solvent wipe (See Step 4) is still needed before coating application.

- Faux stainless steel appliances are not suitable for our coatings due to the plastic nature of the material.
- Stainless Steel (where rust needs to be removed): Stainless Steel Rust Remover and our fine grade synthetic steel wool Prep Pads are excellent for removing rust. (Do not use regular steel wool.) See the specific Rust Remover directions first. Rusty stainless can also be wet sanded with very fine 600-2000 grit automotive sand paper. Always clean and sand with the grain.

### JEWELLERY:

Jewellery items due to their size can be brushed, dipped or sprayed and it is best to bake cure them. Refer to 'Cure Time' instructions.

- Brushing: Lay your items on aluminium foil and brush ProtectaClear on with a natural-bristle brush or a sponge-brush. Gently glide the brush over the surface without getting too much excess on the foil below. After an hour you can apply the 2nd coat. If you want to coat the other side of the piece, wait at least 2 hours before turning it over to coat the other side (use a new piece of foil to coat the other side on to avoid any wet coating sticking to the dry side) We recommend coating the "back side" of the piece first.
- Dipping: Place a piece of aluminium foil or something under the items in case of drips. You can insert an unbent uncoated paper clip through the eye of your jewellery piece to dip it or use a skewer stick and balance the stick across an icecream container to catch the drips. Dip the piece in the coating, and then pull it up. Let the coating drip for a few seconds. It is helpful to have a small "artist's paintbrush" to brush off the excess coating that may gather at the bottom and around the hanger. Hang the item to dry where it isn't touching anything else. Make sure to check the item after a couple of minutes, to see if any excess coating has gathered at the bottom. Once the piece has dried for at least an hour, and is dry to the touch, you can apply the 2nd coat. Dip the item, smooth out the excess, and let it dry.
- Spraying: Hang the item and spray. You should be 15cm inches away when spraying. Do not over spray; a quick pass is sufficient for each coat. Apply 2nd coat after 1st coat is dry to the touch, at least an hour.

## RECOMMENDED NUMBER OF COATS

# coats	Surface / Environment	Item Description	Coating Type
1 to 2	Brass, Bronze, Copper, Silver INDOORS	<ul style="list-style-type: none"><li>• Highly Polished Metals</li><li>• Ornamental: 1 good coat</li><li>• Items with high handling or high use/abuse: 2 coats</li></ul>	ProtectaClear
2 to 4	Brass, Copper INDOORS - DAMP, WET, HIGH USE AREAS	<ul style="list-style-type: none"><li>• Kitchen Sinks: 4 coats</li><li>• Bathroom Sinks: 2 coats</li><li>• Kitchen Splashbacks, Hoods: 2 coats</li><li>• Countertops/Bar/Tabletops: 3 to 4 coats</li></ul>	ProtectaClear
2 to 3	Brass, Bronze, Copper OUTDOORS	<ul style="list-style-type: none"><li>• Copper Roofing: 2 to 3 Coats</li><li>• Copper Spouting, fittings: 2 to 3 coats</li></ul>	Everbrite
3 to 4	Jewellery - all metal types	<ul style="list-style-type: none"><li>• Jewellery: 3 to 4 coats</li></ul>	Protectaclear
1	Stainless Steel	<ul style="list-style-type: none"><li>• Kitchen Appliances, Hoods: 1 good coat</li></ul>	Protectaclear
2	Stainless Steel/Aluminium OUTDOORS	<ul style="list-style-type: none"><li>• Bannisters, Building Cladding, Fittings: 2 coats</li></ul>	Protectaclear
3 to 4	Stainless Steel/Aluminium MARINE, COASTAL AREAS	<ul style="list-style-type: none"><li>• Bannisters, Building Cladding, Fittings: 3 coats</li><li>• Boat above waterline: 3 coats</li><li>• Boat Hulls Moored: 4 coats</li></ul>	Protectaclear
3	Walkable Surfaces INDOOR or OUTDOOR	<ul style="list-style-type: none"><li>• Highly Polished Metals – Pedestrian traffic: 3 coats</li><li>• Steps, Bridges: 3 coats</li></ul>	ProtectaClear
1 to 2	Formica	<ul style="list-style-type: none"><li>• Indoors</li></ul>	ProtectaClear
3 to 4	Steel (Raw, Cold Rolled, other)	<ul style="list-style-type: none"><li>• Indoors, Outdoors</li><li>• High Use items (Use Protectaclear – apply 4 good coats)</li></ul>	Everbrite ProtectaClear