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COAT ONE



GEL COAT INSTRUCTIONS

A PERFECT MATCH EVERY TIME



VETERAN OWNED COMPANY

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HOW TO APPLY GEL COAT

Below you will find a detailed gel coat preparation guide on how to properly apply gel coat to your boat, RV or other surface.

1. **Determine the Existing Surface:** The first thing you want to do is take a good look at the surface you want the gel coat applied to. If the surface is already coated with gel coat, or if the surface is a fiberglass or polyester resin, then the process will be a snap. If the surface has paint on it, be sure to remove it before applying the gel coat.
2. **Prepping the Surface:** Remove rails, cleats, louvers, snaps, striping tape, etc. Duct tape off adjacent gunwale molding, and deck fittings you are unable to remove. (Duct tape is recommended over masking tape because it provides better protection). Remove seals from the edges of parts or fittings when doing repairs in close proximity to them. Take steps to cover and protect the rest of the boat before starting. When working on the deck or cabin, tarp off the adjacent areas. 3M, UV tapes, and masking papers are recommended.
3. **Sanding Existing Gel Coat:** You want to sand the surface to make a mechanical bond to the gel coat. Our technicians suggest using Dykem Steel Blue Dye to be really thorough. Steel Blue dye can be applied through wiping it onto the surface or by using it as a spray. Once the blue dye is no longer visible, you've sanded it all properly and can proceed to the next step. Start by sanding the surface with 150 grit sandpaper. The heavier fast-cut grits (40/80/100) are used to feather sand and ground out a routed area prior to filling. Also, they are useful for the first sanding of gouges, dock dings, scratches, and blisters. When sanding areas that have been filled with putty, we suggest using 40 or 80 grit sandpaper, depending on the size of the repair. Once the fill area is level or contoured to the desired shape, sand it with 100 grit paper to remove the course scratches from the 40 or 80 grit. Be sure to feather the surrounding area of the gel coat repair with 220/330. Once completed, your repair is ready to prep and spray/brush with gel coat. Use 3M Abrasives for best results.
4. **Preparing the Surface for Application:** Next, you're going to have to clean the surface. We encourage the use of Acetone, because it does not leave residue and evaporates easily. When the surface is clean, you want to get moving fairly quickly; if left sitting for too long, make sure to re-clean the surface. Dust and dirt particles are your enemy here, so make sure you clean the surface thoroughly. Determine whether you need one or two gel coat applications. If you change colors, it will require at least two. If going over a patch, at least 2 coats are recommended to ensure a uniform surface. Otherwise, one coat is sufficient.
5. **Method of Application:** Next, determine if you are going to brush, roll or spray your gel coat so you can prepare it for application. You may either roll the gel coat on, like paint, or spray it on to apply it. This Brushable Gelcoat can be applied with a brush and does not need any other additives except MEKP, which is included with your purchase. If you want to roll on a gel coat, use a 1/8" or 1/4" solvent resistant nap. Be sure not to use foam rollers because they tend to leave bubbles. Make sure to use a solvent-resistant brush if you decide to brush it on.



6. Gel Coat Additives: You should also determine which additives you will use with your gel coat application.
 - A. Wax Additive: Add up to 4 oz of Wax Additive per gallon, and 1 oz per quart for a tack free surface on the final coat, or, if applying one coat, a recommended film thickness. The Exterior Gel coats that recommend a wax additive are included with your purchase at Bottom Paint Store (A wax additive is NOT used with Brushable Gel Coat or HI UV Clear). You should only use a wax additive in the final application coat or if you are planning on only one coat.
 - B. Partall® Film #10 PVA Surfacing Agent For Gel Coat: Use this product as a surfacing agent when using Gel Coat without wax additives and typically larger spray applications. Partall® Film #10 is a polyvinyl alcohol (PVA) water/alcohol solution of water-soluble, film-forming materials. This film is particularly recommended as a parting agent for separation between polyester or epoxy resins and various mold surfaces. It is not recommended for use with resins containing water or that give off water during curing (i.e., phenolics) or with automotive finishes, as damage may occur. Partall® Film #10 will not shrink and pull away from corners or curved surfaces. After the resin has dried, the film parts easily from the mold and is readily dissolved from the molded parts with water. An occasional coating of Partall® Paste #2 may be required on most mold surfaces before any application of Partall® Film #10. May be applied over gel coat as a surface cure agent. (Recommended for HI UV Clear since no wax should be added).
 - C. Patch Booster Gel coat Additive is an additive that significantly improves the application, appearance and longevity of gel coat patches. Patch Booster eliminates the need to thin, side promote, or add wax to gel coat prior to patching. Formulation enhancements have lengthened the shelf life of a sealed can to (1) year, while maintaining a sandable cure in 1-3 hours. Do not use any other wax additive when using Patch Booster. Patch Booster should be used with a Professional Grade Exterior Gel Coat.
 - D. Tinting: Neutral Gel Coat may be tinted using Pigments for Gel Coats and Resins which are designed for use in Neutral gel coats. Do not use more than 1 oz tint per quart.
7. Catalyzing Gel coat with MEKP: All gel coat MUST be catalyzed with MEKP to cure properly. This should be added after all other additives, just prior to application. Gel coat requires Methyl Ethyl Ketone Peroxide or MEKP to enable the process of hardening in a very small percentage. We suggest 1-1/4% to 1-1/2% by volume, i.e. 13-15 cc per quart. Darker colors need a little more catalyst for the same reaction, so in that regard you can add up to 2%. All Gel Coats from Bottom Paint Store include MEKP with each gel coat purchase. Refer to the catalyst chart located on the product page for the gel coat you are using or follow the label guidelines. As a general rule, the catalyst level (MEKP) should not exceed 3.0% or fall below 1.2% for proper curing. The ideal range is 1.8% @ 77°F. Gel time at 1.8% MEKP is 10-17 minutes. This time range is contingent on material temperature, room temperature, humidity, air movement, and catalyst concentration. Gel coat should not be used when temperature conditions are below 60°F, as curing may be adversely affected. Be sure to have a good strategy when applying your gel coat. Once you mix and catalyze, you have about 15 minutes to apply the gel coat before it starts getting hard or begins to "gel." The actual working time depends on the amount of catalyst and how hot the working conditions are. Anything below 60 degrees, and your gel coat will not cure, but as you get warmer and warmer, your working time will decrease rapidly. At 70 degrees, you get 15 minutes, but at 90 degrees, you only get 5 minutes. If you need more time to work, be sure to sit the can in some cold ice water to cool it down to 60 degrees to



allow you a little more working time.

- A. 1 ML = 1 CC
 - B. If using a wood mixing stick, place the stick in resin before adding catalyst so the wood doesn't absorb the catalyst.
 - C. Only catalyze slightly more than needed. Resin that cures still in the mixing pot is unusable. Mix small batches at a time since too much MEKP will result in the gel coat hardening way too fast! Refer to the catalyst chart located on the product page for the gel coat you are using or follow the label guidelines.
 - D. Gel Coat requires the addition of fiberglass resin hardener or catalyst (MEKP) at 1.8% by volume (77°F) (approximately 12 drops per ounce).
 - E. Measure the catalyst accurately. Under or over catalyzation retards curing and causes fading and chalking.
 - F. All Gel coats from the Bottom Paint Store include MEKP catalyst but additional amounts can be purchased.
8. Applying Gel coat by Brush or Roller – (Use a Brushable Gel coat): When applying gel coat by brush or roller, we recommend the Ultra Plus Brushable Gel coat . (other Gel coats are best applied by Spray) The Ultra Plus Brushable Gel coat is designed for self-leveling and is a much easier application. It allows for a much smoother finish and less time executing it. It is easy to use for DIYers! Choose a good pure (natural) resin resistant bristle brush with tapered ends. Avoid brushes that are either too stiff or too soft. For most work, a 3" or 4" wide brush will suffice. If there is a trim color, you should have a narrow trim brush on hand. Our Brushable Gel coat comes with MEKP hardener with every purchase, but you may need more, which you can purchase as an option depending on the application, temperature and other environmental factors. Please refer to the Catalyzation chart on the Brushable Gel coat page or on the label. Gel coat needs to be applied evenly. We suggest a thickness of 18-20 mils to properly cure. (For Reference: The thickness of a matchbook cover is approximately 18 mils). If you're not sure how thick it is, pick up a mil gauge. This is a simple, easy way to monitor the thickness of your gel coat. Gel coat needs to be applied evenly. We suggest a thickness of 18-20 mils to properly cure. The thickness of the matchbook cover is approximately 18 mils. If you're not sure how thick it is, pick up a mil gauge. This is a simple, easy way to see the thickness of your gel coat.



9. Spraying Gel coat: (Please follow the instructions located on the products page or the label.) Spray the Gel coat at a delivery rate of no more than 2.5 pounds per minute with conventional air atomized spray, and no more than 4 pounds per minute with airless equipment. Spray: Airless or Conventional: 2.0-2.5 orifice tip. Use a gel coat spray gun such as ES Manufacturing Gel coat Spray Gun G830, ES G100 Spray Gun, or equivalent.

Initially spray a cover coat as smooth and evenly as you can to cover your repair. This coat should be mostly in the repair area, and may be repeated as needed. Sanding between coats is not necessary unless a surfacing agent has been added to your gel coat. Once your repair is covered, feather a 'flow' or sanding coat on the masked-off area, making layered passes to avoid a buildup of gel coat in any one area. Each of these coats of gel coat may involve several passes. Be even and consistent in your gun movement, overlapping each previous pass slightly and not hesitating on the ends. When spraying to a radius, flow the gel coat to the tape. In open flat areas, utilize layer passes. Final thickness should be 16-20 mils minimum or the gel coat may not fully cure. As soon as you are done spraying, clean your sprayer fully with acetone. Most re-sprayed gel coats will cure in 2-4 hours, although overnight cures are ideal.

10. Finishing your Gel coat Application: If you're using our Professional Grade Exterior Gel coat, you'll be ready to sand and buff your freshly gel coated surface after about 1- 3 hours. If you are using our Brushable Gel Coat, you'll want to let it cure overnight to make sure it's completely cured. Begin wet sanding with the finest grit that will remove orange peel in the re-sprayed area. This will avoid unnecessary sanding scratches. Usually 320 or 400 grit wet paper is sufficient for the initial sanding. Go up to 400, then 600, and eventually 800 grit sandpaper. You can use an 800-grit compound for the gel coat at this stage. Make sure to use a buffer that turns 1600-3000 RPM. The car polishers won't work if they're spinning too slowly, so you want to check the speed of the spin. It's best to do a 4-foot by 4-foot area at a time. Every 10 feet or so, you're going to want to clean your pad with a spur or some air to make sure the contaminants don't scratch your surface. If you want a perfect, glossy shine, use a machine glaze and then two wax coats, and you'll have a stunning, glossy professional finish.

Important Gel coat Application Tips:

- **DO NOT WORK IN DIRECT SUNLIGHT.** Choose a shady location or an overcast day. You should catalyze your material so that it cures as quickly as possible within your working time. Generally, mix one-pint batches. A good practice is to pour the mixed gel coat from the mixing container into another container used for application. This further assures that no uncatalyzed material is clinging to the sides of the pot. "Lay on" the gel coat in a heavy thickness (about 10 mils) using horizontal strokes, working from top to bottom. Avoid re-brushing, as this could remove the waxy surface additive. Remember to always lap wet. Generally, one heavy coat is sufficient. However, if you have opacity problems, two coats may be necessary with a light sanding between coats. Once the coating (gel coat) has cured, it should be block sanded using a 250 wet grit paper to remove all brush marks and high spots. Following this, it should be wet sanded with 320, 400 and 600 wet grit paper, buffed, polished and waxed.
- Clean repair area and all tools with acetone prior to application.



- Pot life (amount of time for application of the product) shortens dramatically as you mix larger batch sizes. Keep in mind that you have a limited time to apply what you have mixed (usually between 5-15 minutes).
- Measure catalyst accurately. Under- or over-catalyzed gel coats will cure slower and look faded or chalky.
- Use only the recommended thinners / additives which are listed on the gel coat's product page. (No Thinning Necessary for the Ultra Plus Brushable Gel coat).
- Gel coat will not fully cure without adding a surfacing agent or over spraying with PVA.
- Check color thoroughly before applying. Gel coat will not darken or change colors when it dries. The color wet is the same color when dry.
- Store gel coat in a cool, dry place.
- Gel coat should be applied in temperatures ranging from 60°F to 80°F.
- Always use eye and hand protection.
- Gel coat should not be applied over paint, wood, metal or concrete. It usually will not adhere to these surfaces.
- Gel coat will not fully cure without adding a surfacing agent or wax additive sanding aid. You can over-spray with PVA before it reaches its gel stage (5-10 min.), or by adding 1 oz per quart / 4 oz per gallon of wax additive sanding aid.
- Read all warnings on product labels and only use additives recommended as described per each product.



GLITTER FLAKE REPAIR

Make sure you have all the materials available (kit content, equipment, acetone, and clean rags) before you start your project

1. Prepare the damaged area by removing grease, wax, debris, etc.
2. Use acetone to clean up residual debris. DO NOT allow the acetone to touch any other areas. (Mask-off the area around the repair for better results).

NOTE: The Gel coat or resin polyester does not bind well to epoxy. DO NOT apply over epoxy.

3. Dispense a little more polyester resin gel than you think is needed to complete all repairs into the plastic mixing cup (to ensure you only need one color match).

If you need to fill in the repair with the color of the paint, mix the base color and MEKP in a mixing cup and put a small amount to fill in the repair with your base color. You can immediately sprinkle or blow a small amount of flake on the repair area.

NOTE: The flake should only be mixed with clear paste for the final coat. Make sure to cover with Mylar paper for proper curing and spread in nice and smooth.

If using the colored glitter metallic flake add the flake to the gel coat in the mixing cup to the desired consistency. Try to keep the added flake below 15% of the amount of gelcoat paste.

After approximately 10-15 minutes You can now add the final coat of clear paste and glitter flake over the color base (if applied color base).

4. For each teaspoon (1/6 oz) of blended gelcoat paste, add four drops of hardener. Thoroughly mix paste, pigments, and hardener. You have a work time of approximately 15 minutes.
5. Use the spreader to add the blend to the damaged area. Work mixture well into the damaged area. Be careful that the mixture does not come into contact with other areas.
6. Use the enclosed clear release paper (or a sheet of wax paper) to protect the repair area entirely. Make sure there are no air bubbles left between the paper release and repair area. Smooth out the repair patch with the spreader over the film. This will help even and smooth out the repair. The patch will heal in about an hour.
7. Remove after an hour—clean the area with a clean cloth with acetone.
8. Sand repaired area with wet 400, then 600-grit sandpaper for a good quality finish. Then, buff with a wax and a good polishing/rubbing compound (included)



GEL COAT REPAIR COLOR GUIDE BLENDING FORMULA

Desired Color to Match Finish	Base Color	Tinting Color
Red	Red	----
Maroon	Red	Black
Light Red	Red	White
Regal Red	Red	Blue
Blue	Blue	----
Navy Blue	Blue	Black
Royal Blue	Blue	White
French Navy	Blue	Red
Turquoise Blue	Blue	Yellow (very small amount)
Turquoise Green	Blue	Yellow
Black	Black	----
Charcoal	Black	White
Brown	Brown	----
Chocolate	Brown	Black (small amount)
Mid-Brown	Brown	Yellow
Medium Brown	Brown	Black and White
Dark Chocolate	Brown	Black
Reddish Brown	Brown	Red
Pink	White	Red
White	White	----
Cream	White	Yellow (small amount)
Almond	White	Yellow and Red to tone. Shade with Blue
Off-White	White	Black or Brown
Light Stone	White	Mid-Brown
Powder Blue	White	Blue
Harvest Gold	White	Yellow and Red to tone. Blue for Eye Appeal.
Dark Blue Gray	White	Black and Blue
Off-White Brown	White	Brown (1st) and Yellow
Wedgewood Blue	White	Blue plus small amount of Black
Charcoal or Light Gray	White	Black



Tan	Yellow	Red and White, darken with Black
Lime	Yellow	Blue (small amount)
Green	Yellow	Equal amount of Blue.
Yellow	Yellow	----
Canary	Yellow	White
Mustard	Yellow	Red and Black
Turquoise	Yellow	Blue and White
Light Yellow	Yellow	White
Orange or Gold	Yellow	Red
Pine or Olive Green	Yellow	Black
Lime or Bottle Green	Yellow	Blue
Beige	White (mix 1st)	Brown and Yellow (small amount)