



# Pettit Technical Bulletin

## Varnishing 101

### Why should I use a varnish?

Like many others, you may be wondering ‘Why should I use a varnish’? As a boater, you take pride in the appearance of your vessel. You keep it in pristine condition and feel great satisfaction knowing that it’s protected. Using a varnishing system not only enhances the natural beauty of your boat; it also offers an excellent barrier against varying weather conditions, the sea and the sun’s UV rays. Varnishing is a delicate process that takes time and patience but yields remarkably beautiful results.

Pettit Marine Paint provides varnishes that are suitable for both exterior and interior woodwork:



**Captains Varnish 1015** – A favorite among traditional marine industry professionals, this varnish is highly regarded for its reliable service, versatile application, outstanding gloss retention, and tough yet flexible durability. It has long been recommended for the highest quality work, with outstanding results and all-around durability. A combination of phenolic and alkyd resins blended with tung and linseed oils provide excellent performance. It’s warm, light amber hue will enhance the rich, classic bright work appearance. Captain’s is considered by its many users to be the most durable varnish ever offered to the boating trade. Contains ultraviolet absorbers and filters



**Flagship Varnish 2015** – With 6 times more UV inhibitors, Flagship offers the best protection against the sun’s damaging rays. A special blend of phenolic and alkyd resins combined with tung and linseed oils offer excellent performance and a warm, light amber hue. Flagship Varnish contains an ultraviolet light filter in conjunction with a light stabilizer to screen the sun’s damaging rays for longer life. Flagship Varnish has the highest build and film depth per coat, as well as excellent abrasion resistance and a high gloss finish.



**High Build Varnish 2056** – A high performance varnish designed to be built up to many coats for a deep, rich, mirror-like finish. The phenolic resin combined with tung and linseed oils increase the depth of gloss with each coat. Hi-Build Varnish contains an ultraviolet light filter in conjunction with a hindered amine light stabilizer to screen the sun’s damaging rays for longer life. A good varnish for building up multiple coats quickly.



**Captain’s Ultra Clear Varnish 2067** – A premium urethane varnish specially formulated for maximum durability and ease of application. The strong ultraviolet inhibitors in Captains Ultra Clear help it maintain outstanding gloss long after ordinary varnishes have faded. Ultra Clear’s tough surface provides remarkable resistance against scratching and chipping. Its easy brushability, excellent leveling capabilities, and fast build-up are among its many attributes that make it a pleasure to apply.



**Captain’s Satin Sheen Varnish V-975** – is specifically designed to enhance the beauty of interior woodwork with its soft, satin finish. Its pale, durable, long lasting polyurethane coat is water and alcohol-resistant. Satin Sheen is easy to apply and is intended for interior use only. Captain’s Satin Sheen Varnish is preferred by those professionals and do-it-yourselfers who derive pride and pleasure from quality brightwork.

Uses	Products	1015	2015	2056	2067	V-975
Light Amber Hue		★	★	★		
For Added Gloss					★	★
Exterior Use		★	★	★	★	
Interior Use						★
Cold Weather Application		★				
Warm Weather Application		★	★	★	★	★
UV Protection		★	★	★	★	



# Pettit Technical Bulletin

## Varnishing 101

### Prepping your surface

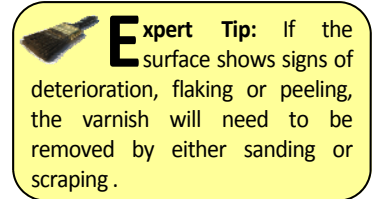
Without a doubt, the most important step to an effective varnish job is prepping your surface.

#### Surface: Bare Wood

1. Ensure the surface is dry and clean.
2. Sand the surface with 150-220 grit sandpaper.
3. After sanding, clean the sanding residue with a tack rag, vacuum, air hose or Pettit's 120 Brushing Thinner.  
\*If using a solvent, allow adequate drying time for the solvent to completely dry out of the wood; drying time will depend on temperature
4. If necessary apply a coat of Pettit's Paste Wood Filler Stain and allow adequate drying time.
5. Apply 1-2 coats of Pettit EZ Wood Sealer 2018 over the surface.
6. Sand the surface thoroughly with 220 grit sandpaper.

#### Surface: Previously Varnished

1. Ensure the surface is dry and clean.
2. Sand the surface with 180-220 grit sandpaper.
3. After sanding, clean the sanding residue with a tack rag, vacuum, air hose or Pettit's 120 Brushing Thinner.  
\*If using a solvent, allow adequate drying time for the solvent to completely dry out of the wood; drying time will depend on temperature
4. If necessary apply a coat of Pettit's Paste Wood Filler and allow adequate drying time.
5. Apply 1-2 coats of Pettit EZ Wood Sealer 2018 over the surface.
6. Sand the surface thoroughly with 220 grit sandpaper.



#### Paste Wood Filler Stains

For surfaces that are permanently stained, porous or grainy, paste wood filler stains can be used to even out the surface for a flawless final appearance.

#### Applying Paste Wood Filler Stains

1. Ensure the surface has been sanded down to bare wood.
2. Any black water stains should be bleached out before applying any paste wood filler stain.
3. Ensure the surface is dry and clean.
4. Mix the filler with Pettit's 120 Brushing Thinner accordingly.  
\* Fillers can be intermixed and shaded with color in oil or universal colorants to achieve custom colors prior to application
5. Apply to the surface by brushing into the wood grain.
6. When the filler begins to dull off, use a burlap or cloth pad to rub off the excess filler using a circular motion.
7. Use a clean wiping pad to remove any remaining residual filler. During this step, wipe against the grain and change the wiping pad frequently.

#### Applying Sealer

1. Ensure the surface is dry and clean.
2. Sand the surface with 180-220 grit sandpaper.
3. After sanding, clean the sanding residue with a tack rag, vacuum, air hose or Pettit's 120 Brushing Thinner.



# Pettit Technical Bulletin

## Varnishing 101

4. Apply 1-2 coats of Pettit EZ Wood Sealer 2018 according to directions
5. Allow sealer to dry per product requirements.
6. Sand thoroughly with 220 grit sandpaper.

### Varnishing

You've prepped your surface, applied paste wood filler stain and a sealer, but the job's not done yet. It's time for the final act, applying the varnish.

### Applying Varnish

1. Choose a dust-free (or as close as possible) environment. If working outside, do not work in direct sunlight or windy conditions.
2. Ensure all post sealer sanding residue has been removed with a tack rag, vacuum, air hose.
3. If applying by brush or roller, add 10-15% of Pettit's 120 Brushing Thinner for the first coat. If applying with an airless sprayer, add 10-15% of Pettit's 121 Spraying Thinner for the first coat.  
\* Only the first coat of varnish should be thinned
4. Apply one coat of varnish and allow to dry overnight.
5. After adequate drying time, sand with 220 grit sandpaper.
6. Remove sanding residue with a tack cloth.
7. Continue steps 4-6 until the next to last coat of varnish has been applied.
8. Prior to applying the final coat of varnish, sand with 400 grit sandpaper.
9. Remove sanding residue with a tack cloth.
10. Apply final coat of varnish.
- 11.

### You've How do I repair scratches, nicks and holes in finished wood?

Begin by sanding the affected area to remove any loose wood or varnish. Next, apply Pettit Paste Wood Filler Stain of your choice. After adequate drying time, sand the area again with 220 grit sand paper. If needed, apply another coat of the wood filler stain and re-sand. Once the filling is satisfactory, apply 1-2 coats of sealer. Allow the sealer to dry and sand with 220 grit sandpaper. Finally, apply 2-4 coats of Pettit's varnish while blending into the existing varnish.



**Expert Tip:** When applying varnish, our experts recommend using high quality brushes and rollers. The quality will save you extra hours of sanding and touching up any unsightly brush marks that can occur when using lesser quality brushes and rollers.



### Frequently Asked Questions:

#### How do I eliminate brush strokes?

To eliminate brush strokes, focus on small areas. Apply the varnish against the grain to start and then go back over the same area this time applying with the grain.

#### How many coats of varnish do I apply?

When applying to bare wood, a minimum of 4 coats is required; when applying over existing varnish a minimum of 2 coats is required.



# Pettit Technical Bulletin

## Varnishing 101

### What is the required thickness of each coat of varnish?

The thickness of each coat is dependent on the product being used.

- 1015, 2067 and V-975 should be applied in thin coats
- 2015 and 2056 can be applied in a heavier coat

All coats should be allowed to dry overnight before sanding or recoating

### What happens if I get drips or dust in the finish?

Drips can occur when a coating is applied too thick. To prevent drips, apply thin coats. Applying several thin coats will often provide better results than a few thicker coats. If drips do occur, sand them out with 200 grit sandpaper with a slight overlap to the surrounding finish. You can then apply a new coat of varnish across the entire surface to even out and blend the appearance.

Should dust get into the wet coating, allow it to dry completely. Once the coating is dry, sand back the surface just enough to remove the contaminants that have become lodged in the coating. Make sure to overlap the surrounding finish to even it out and then apply a new coat of varnish making sure to blend the appearance.

Why is the varnish taking so long to dry?

There are some very common reasons why it may take longer than described for the varnish to dry.

- High humidity or excessive moisture in the air, can prevent proper drying of varnishes. If it is very humid out and you can wait until the next day to work out the project, try to do so. If not, bring your project into an air conditioned area or a room with a dehumidifier. Be sure to have the air conditioner pulling in air from the outside, not re-circulating indoor air, as poor ventilation will also extend dry times.
- Applying thick coats, or excessively applied paint films, will take much longer to dry due to solvent entrapment. This occurs when the outside of the paint film dries faster than the inside, trapping solvents. The product will eventually dry, just wait it out. The varnish will become harder and more durable over time as the solvents leave the film.
- Temperatures 50°F and below will extend drying times considerably. If you are under time constraints we suggest moving your work to a warmer area. Applying varnish and allowing it to dry in a warmer workspace will increase its drying rate.

### Why are there bubbles in my varnish after I have applied it?

Bubbles can occur when applying varnish with a brush because the action of brushing can agitate the surface and introduce air into the finish. Over brushing will introduce even more bubbles. The more you work a section, the thinner the film becomes and the faster the solvent evaporates, which does not leave enough time for the film to self level. When this happens, brush marks and bubbles aren't able to level themselves out.

To prevent this from occurring further, apply 10-15% more Pettit 120 Brushing Thinner to the varnish. This will allow the varnish to dry slower, giving it more time to self level. If you do thin the varnish additional coats may be necessary to maintain the same protection as full strength coats because the added solvent will reduce the amount of resin in the varnish. This method may be a bit more time consuming but it will prevent air bubbles and yield a better finish.