

ATTENTION: Always refer to the **Technical Manual for Interior Flooring Products** and corresponding **Technical Data Sheets** for complete installation information prior to starting the job. Lonseal reserves the right to change our products' design, material, and/or to improve products or processes at any time without notice. Installation procedures and use of Lonseal adhesives must be in strict accordance with Lonseal's technical documents for warranty terms to be valid. **Please review the website for the most current technical information.**

RELATED TECHNICAL DATA SHEETS:

- ▶ #650 Two-Component, Solvent-Free Epoxy Adhesive
- ▶ #400 Contact Adhesive
- ▶ Lontape
- ▶ Welding Thread
- ▶ Marine Trim

ADDITIONAL MATERIAL REQUIRED*:

- ▶ Lexel® Clear Sealant
*This item is available from Lonseal (Product #ZCAULK), and all technical information may be found at: <http://www.sashco.com/products/lexel/>.

APPLICATION:

1. Prepare the approved type plywood panels by filling any joints or screw holes with a Portland cement-based patching compound. Prepare metal or fiberglass substrates by sanding with 60 grit sandpaper and brush or vacuum to remove any remaining debris. Prior to sanding, it is recommended that metal substrates be wiped down with denatured alcohol applied to a clean cloth to remove any contaminants. **Always use caution when working with denatured alcohol.**
2. Ensure that all materials have been properly acclimated. Since most marine installations are not performed in temperature/humidity controlled environments, dimensional changes in the material and differing open/working times with the adhesive need to be taken into consideration. Please refer to **Notes** below for additional information.
3. Apply the #650 using a 1/16" x 1/32" x 1/32" U-notch trowel and lay the flooring immediately. The #650 is a wet set adhesive, and allowing too much open time will reduce its bond strength.
4. If using the #400, apply the adhesive to both the back of the flooring and the substrate using a 3/8" nap roller or paint brush. Place the floor into the adhesive while it is still slightly wet. Do not allow the #400 to dry, as this will result in a poor bond.
5. If using Lontape, apply a full spread of the tape to the back of the flooring material. Place and align the floor, gently fold the flooring over itself lengthwise, keeping the radius large when folding the material. Failure to do so could result in damage to the flooring, and visual imperfections may appear on the surface. Remove the liner from one half of the sheet, and slowly replace the floor, applying pressure from the center out to the edge. Repeat with the other half.
6. Once the flooring has been placed, roll it in both directions using a minimum 75 lb., three-section roller. If unable to utilize this type of roller due to the size of the boat or accessibility, a three-section laminate roller may be used. When using this smaller roller, the installer should put enough weight behind it to help ensure a good bond. Check for full adhesive transfer from the substrate to the back of the flooring after rolling into the #650, but do not disturb the material after rolling if using the #400 or Lontape.
7. When #650 is used, roll the floor again 2 to 3 hours later.
8. Heat weld all seams 24 hours after installation, unless Lontape was used. See note below regarding products which cannot be heat welded due to their heavy embossing.
9. If installing Lonseal Marine Trim, allow the adhesive to cure prior to installation. Trim may be installed the same day if Lontape was used.
10. Perform initial maintenance 48 hours after installation. See below for additional maintenance information.
11. The adhesive will be fully cured 72 hours after installation, with Lontape being fully cured after 12 hours. Avoid foot traffic until this time has passed.

NOTES:

- ▶ When cutting the flooring to fit the installation location, be aware that sheet vinyl is subject to dimensional change. Lonseal accepts no responsibility for dimensional changes to flooring that is cut into shapes or cut outside recommended environmental conditions. The amount of change will depend on the environment in which the flooring is cut versus the environment in which it is installed. Keeping the flooring acclimated in similar, if not the same, environments can help reduce or eliminate this natural occurrence, as can cutting the material slightly larger than needed, and trimming to the correct size just prior to installation. Optimal acclimation and installation conditions will be in a controlled environment between 65 °F – 85 °F (18.3 °C – 29.4 °C).
- ▶ Lonseal adhesives are meant to be used in a controlled environment to ensure that they perform as detailed in their technical data sheets. When not installing in a controlled environment, the adhesives may have different open and working times. A bond test is recommended to determine how the adhesive will be affected by these types of installation conditions.
- ▶ It is only recommended to use Lonseal adhesives. Should another manufacturer's adhesive be used, it will not be supported by Lonseal. Should any issues arise with the adhesive, such as bond failure or adhesive displacement, that manufacturer will need to be contacted to address the situation.

- ▶ Heavily embossed products (e.g. Lonplate I or Lonplate II) cannot be heat welded, and may be left untreated due to the full spread of epoxy adhesive being used. Ensure the seams are as tight as possible to minimize the build-up of debris and soiling.
- ▶ DFT and Lonsealer are not recommended for marine installations.
- ▶ Lexel® Clear Sealant can be used to seal the perimeter of the installation to further protect exposed areas from moisture penetration.
- ▶ The #650 is only meant to be used as an adhesive. It should not be used as a filler or leveler for the substrate. If an epoxy-based product is necessary for smoothing or leveling the substrate, consider using WEST SYSTEM® Epoxy, following their recommendations for use in this type of application. Once the epoxy has cured, roughen the surface by sanding with 60 grit sandpaper and brush or vacuum to remove any remaining debris. Then proceed with the installation as noted above.
- ▶ For installations requiring MED/USCG certified products, only the Lonmarine and Loncommodore flooring lines are certified. The #650 epoxy adhesive is included in the certifications.

MAINTENANCE: Finishes should only be applied to fully interior installations of Lonseal flooring, unless the finish manufacturer has a product which is suitable for exterior or semi-exterior use. Routine maintenance for all installations should be performed using a neutral pH cleaner, with the exception of exterior Londeck installations, which will use properly diluted TSP (trisodium phosphate) and a deck brush, rinsing the surface after scrubbing. Refer to the appropriate **Maintenance Guide** for additional information.

EPOXY ADHESIVE ALTERNATE: As an alternate to the #650, WEST SYSTEM® Epoxy may be used. The 105 Epoxy Resin should be mixed with either the 205 or 206 hardener, or for warmer climates, the 209 hardener. After thoroughly mixing, add enough 406 Colloidal Silica filler to create an adhesive paste with the consistency of mayonnaise. All surface preparation and application instructions will be per the manufacturer's recommendations. Additional information regarding the use of WEST SYSTEM® Epoxy with Lonseal flooring may be found at www.lonseal.com, under the **Technical Bulletins** section.

MED-APPROVED ADHESIVES: While the #650 adhesive is included in Lonseal's MED/USCG certifications, the following alternate adhesives have been approved for use by their manufacturer with Lonseal's flooring. The MED certifications are available from the manufacturer.

Adhesive Manufacturer	Type of Installation		
	Standard (Permanent)	Heavy Duty/ Wet Areas	Vertical
	Acrylic Adhesive (Controlled Environments Only)	Epoxy Adhesive	Contact Adhesive
F. Ball	Styccobond F44 or F46	Styccobond F81	Styccobond F66
	Contact: Jonathan Goold, +44 1538 361 633 or jonathan.goold@f-ball.co.uk		
MAPEI	Ultrabond V4 SP Fiber	N/A	N/A
	Contact: Steve Lima, (617) 407-6217 or slima@mapei.com		

NOTE: All warranties and support for these adhesives will be through the adhesive manufacturer. Follow the manufacturer's installation recommendations explicitly to ensure a proper installation.