



## SPARTITE 2000

These instructions describe the SPARTITE PATENTED METHOD for installing SPARTITE and should not be attempted with anything except SPARTITE. If you feel you cannot successfully carry out these instructions ask a professional rigger to install it for you.

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WEBSITE

1-877-SPARTITE (772-7848)  
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LEAVE THESE INSTRUCTIONS ON BOARD FOR THE CAPTAIN TO REVIEW

OVERVIEW

SPARTITE solves the age-old problems associated with securing and supporting keel stepped masts at the partners. SPARTITE creates an integral, structural system between the partners/deck collar and the mast. Simply pour mixed SPARTITE into the space around the mast for a secure tight fitting ring that remains on the mast when it is un-stepped. SPARTITE installation can usually be completed in a few hours.

FACTS ABOUT SPARTITE AND THE INSTALLATION PROCESS

- \*Read all directions and product warnings prior to use.
- \*Clean up any spilled SPARTITE immediately using alcohol or acetone.
- \*To ensure easy clean-up, cover deck area around the mast and collar with drop cloth or newspaper, etc.
- \*SPARTITE is inert in its cured form, BUT THE INGREDIENTS ARE TOXIC BEFORE CURING. Never pour liquid SPARTITE or its two components down a drain or sewer.
- \*OPEN THE CANS OF SPARTITE ONLY WHEN YOU ARE READY TO MIX AND POUR. IF YOU ATTEMPT TO RESEAL THE CANS WITHOUT DRY PURGING THEM WITH NITROGEN THEY MAY BEGIN TO HARDEN AND BECOME UNUSABLE.
- \*Once the liquid SPARTITE has been thoroughly mixed, pour into your mold cavity IMMEDIATELY. Depending on temperature, SPARTITE will begin to cure within 7 to 14 minutes. For example, at 100°F after mixing 2 minutes, SPARTITE will begin to harden in 7 minutes, at 75°F SPARTITE will begin to harden in 12 minutes.
- \*SPARTITE becomes sailable in 48 hours during warm weather (over 24°C [75°F]) and 3 to 4 days in temperatures between 10°C (50°F) and 21°C (70°F). Using a heat source for the first 10 to 16 hours can reduce curing time.
- \*Prolonged exposure to UV rays may cause cosmetic checking to appear on exposed surfaces. While this does not affect SPARTITE's integrity, painting the surfaces with plastic model paint (TESTORS) or covering with a boot eliminates this effect.
- \*SPARTITE is designed for use with metal (painted and unpainted), carbon fiber or varnished wood. Do not use on non gel-coated fiberglass or bare wood.
- \*Use only materials supplied with this kit or plastic mixing sticks and glass or plastic pouring cups.
- \*SPARTITE must be protected from contact with water or other liquids while mixing and until it sets up. These substances will cause SPARTITE to foam and weaken the cured

system.

\*SPARTITE is rugged and should provide long durable service. Considering the variations in sailing conditions, the length of time SPARTITE will maintain a watertight seal against the mast on a specific boat is hard to determine. However, due to its low shrinkage (less than .0001") and its high resiliency, occasionally run a bead of non-silicone caulk at the mast or seams to maintain a good watertight barrier.

\*When un-stepping the mast, take a razor knife and insert it horizontally between the deck collar rim and the cured SPARTITE and run the blade around the collar. This will break that seal. If the mast tends to slide through the SPARTITE ring instead of the ring coming out with the mast, place a hose clamp around the mast below decks. This will free the SPARTITE from the partners as the spar is raised. The SPARTITE ring remains on the mast for reuse.

\*Typically you need not move the SPARTITE ring to re-step each season. If it interferes, we suggest you lubricate the spar with petroleum jelly for about 15 centimeters (6") above SPARTITE's installed position. Then slide the SPARTITE ring up a few centimeters. After the mast is stepped and the shrouds and stays are on, push the SPARTITE ring back down into the partners/deck collar. To maintain a good watertight barrier, it may also be advantageous to place a bead of caulk (LIFE SEAL) around the rim of the deck collar before re-seating the SPARTITE ring. After everything is back in place, another bead of caulk around the base of the mast where the mast and SPARTITE meet will help keep things dry below. SPARTITE re-positions the mast exactly where it was last season.

\*If there is equipment mounted on the mast close to the deck collar which would prevent you from sliding the ring up the mast when re-stepping, then you might want to make a fore and aft ring instead of one piece. Do this by installing thin plastic or cardboard barriers in the mold on each side of the mast to form two separate halves. Seal their edges with some of the clay. Make sure you apply petroleum jelly to the barrier.

\*The SPARTITE system should be installed on a dry day with temperatures above 10°C (50°F). For best results install SPARTITE when it is between 21°C and 24°C (70°F-75°F). Prior to and during the SPARTITE installation, keep the liquid SPARTITE cans at an ambient temperature (70°F), and out of the sun. If the SPARTITE is too hot or too cold it will dramatically affect cure times.

\*FOR MASTS RAKED MORE THAN 10° (NOT PREBEND) CONTACT SPARTITE'S TECHNICAL HELP NUMBERS (TOP OF PAGE 1) BEFORE BEGINNING.

#### ITEMS NEEDED TO COMPLETE SPARTITE INSTALLATION

##### INCLUDED WITH KIT

SPARTITE round and flat can\*  
 Oil based modeling clay  
 Wood molding stick  
 Stirring stick  
 Plastic gloves  
 Closed cell foam strips  
 Plastic pouring cup  
 These instructions  
 SPARTITE Decal  
 Petroleum Jelly  
 \*(2 round and 2 flat cans with large kit)

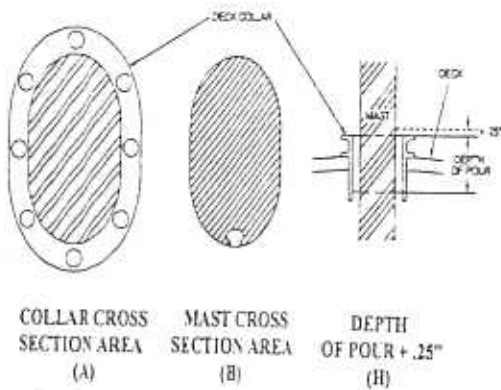
##### NOT INCLUDED WITH KIT

Razor knife  
 2" masking tape  
 Paper towels  
 Drop cloth or newspapers  
 Alcohol or Acetone  
 Cotton swabs

#### DIRECTIONS

To figure the amount of SPARTITE needed, estimate the square inch or square centimeter area of the mast cross section at the partners and subtract this from the square inch or square centimeter area of the deck opening. Multiply this number times the desired depth, which must be at least 5 cm (2"), then add 1 cm (1/4"). For Example: Deck opening of 320 sq. cm. minus mast cross section area of 190 sq. cm. = 130 sq. cm. Times depth of pour of 5 centimeters, plus 1 centimeter = 780 cubic centimeters of SPARTITE. (320 - 190 = 130 x (5 + 1) = 780 cu. centimeters)

FIGURE 1

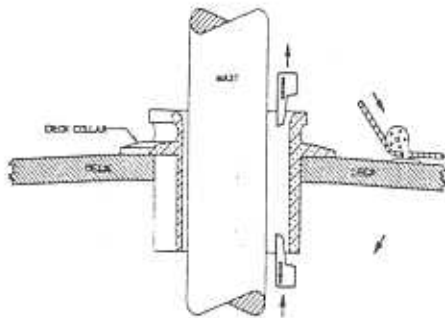


See Figure 1. Kit 1 (small) covers approximately 840 cu. cm. (51 cu. in.) and Kit 2 (large) covers approximately 1680 cu. cm. (102 cu. in.). If you purchased too little, you can add more on top whenever it's convenient. Make sure surfaces are dry and free of petroleum jelly or other residue.

1. Before installing SPARTITE clean all surfaces that will come in contact with SPARTITE, removing old tape, glue, caulk, grease, dirt and dust. Surfaces must be dry before proceeding.

2. Locate and stabilize the mast in its proper place by using one or a combination of the following methods: adjusting shrouds and stays, using deck lines and blocks, or positioning wedges from underneath inside the cabin (you may have to cut your wedges down in length to keep them clear of the mold area). See Figure 2.

FIGURE 2



Do not assume that the partner opening is centered over the mast step. Often they are off-center leaving the mast to one side, fore or aft within the partners/deck collar. The ability to easily accommodate this off-center position and reproduce it whenever you re-step, is one reason SPARTITE is a superior replacement for wedges. You only have to establish proper mast position once. See Figure 2.

\*\*\*\*Note: If installing SPARTITE on a windy day or in a wavy or turbulent area make sure you eliminate mast pumping, shuddering, and boat roll which could cause an un-level cure, a poor seal or could spill the liquid SPARTITE out of the mold before it sets (usually within 15 to 20 minutes). Waiting for a calmer day is better.\*\*\*\*

Racers or boats with bendy rigs - SPARTITE seems to maintain its shape and sealing qualities longer if you establish any pre-bend first, then apply backstay pressure as if you were hard on the wind. Then perform the installation. You can establish pre-bend without using wedges by taking a line forward to the bow and back to a winch. Let SPARTITE cure for 3 or 4 days if possible before relieving the backstay pressure.

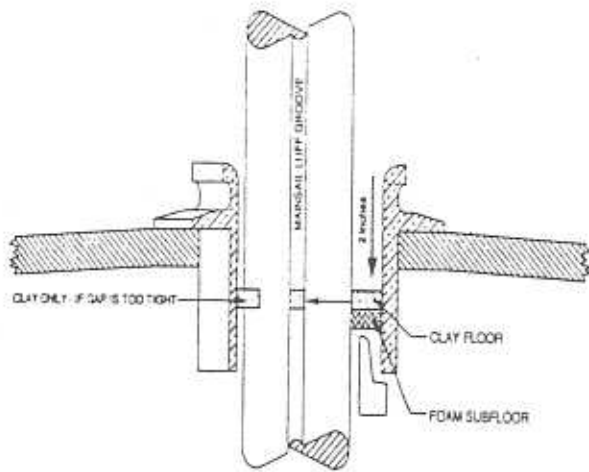
3. Using one of the following methods, create a floor between the mast and partners in order to contain the liquid SPARTITE.

\*\*\*\*Note: The floor should be at least 5 to 8 centimeters (2 to 3 inches) from the top of the collar.\*\*\*\*

On many boats because of the way the deck collar and partner are constructed the depth the collar alone is all that the builder made available for wedging. When the deck collar extends through the deck, make the floor slightly below deck level.

There is not much point to pouring it beyond the bottom of the deck thickness even if you can. Remember that conventional wedges usually touch the mast in a few places and only for a fraction of their depth. In contrast, the SPARTITE ring will completely surround and be in constant contact with the mast. Very deep pours (18 cm [7"] or more), prove difficult to remove due to surface friction.

FIGURE 3



On boats where the deck collar sits on top of the deck and there is no flange or sleeve on the collar which goes through the deck, it is best to either keep the SPARTITE above the seam between the deck and deck collar or fill and fair this seam with the clay if you intend to pour past this seam. If SPARTITE flows and cures between the deck and deck collar it would make it difficult to remove. For this same reason it is good to fair with clay any extensive rough surfaces like exposed deck core or deep indentations in the old area like screw countersinks, etc. See Figure 3.

On boats with wood frame partners which protrude above deck and form a wood collar it is best to pour the SPARTITE to the bottom of the deck thickness so the mast pressure isn't just on the

unsupported wood frame. Make sure wood is painted, sealed or varnished.

Method A) Knead the modeling clay (supplied) into strips approximately 1 cm (1/4") wider than the gap between the mast and partners/deck collar and about 10 cm (4") long. Press the clay strips into the area between the collar and the mast. When adequate below deck access is available, a second person pushing back with a blunt end tool will aid the individual on deck to mold a tight fit to the collar and mast. If the mast has an extruded main sail luff groove in this area make sure clay is forced into this groove making a seal. You may want to jam some of the closed cell foam into the groove first to help support the clay. See Figure 3 & 4.

Method B) The larger the gap the more necessary and easier it is if you place a sub-floor between the mast and partners/deck collar to support the clay referred to in Method A. In this case, trim the closed cell foam strips provided in the kit so you can compress them into a tight fit in the gap between the mast and partners/deck collar. Force these strips into the gap below the desired floor level of the mold and then pack the clay on top of the foam to bring the mold depth up to the desired level. (Don't forget the mainsail luff groove.) See Figures 3 & 4.

4. Using your finger, knife, screwdriver or other tool press the clay to the sides of the mast and collar forming a tight seal between the collar and the mast. You now have created the floor of the mold that will hold the liquid SPARTITE.

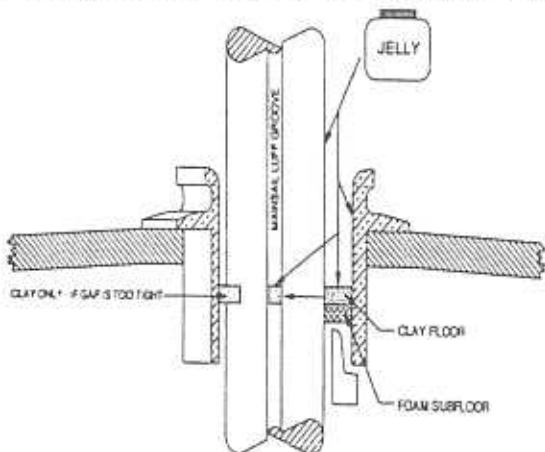
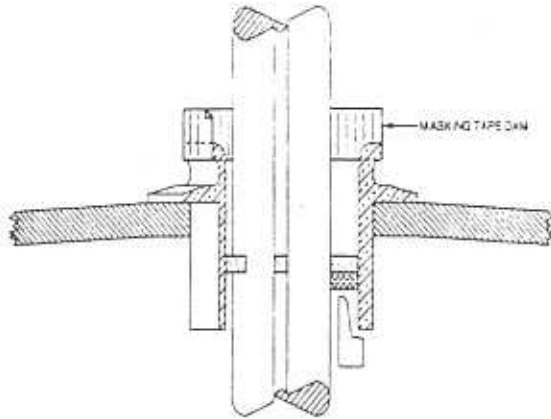


FIGURE 4

5. Spread a thin coat of petroleum jelly (release agent) in the mold area, coating the inside collar and clay floor only. If you tension your rig by hydraulic jacks at the mast step, have a bendy spar or want a little movement without bonding the SPARTITE to the mast then coat the mast as well.

Please note, You will get a better seal if you were bonding to the mast. If the mast has an extruded main sail luff groove that extends through the mold area, make sure to coat the inside of this groove. Cotton swabs work well in tight areas. See Figure 4.

\*\*\*\* Note: This coating becomes the releasing agent and keeps SPARTITE from sticking to surfaces. It is important that all surfaces you want to release from SPARTITE be covered with this releasing agent. Failure to do this may require SPARTITE to be cut away the next time you want to remove the mast.\*\*\*\*



6. Overlap sections of 5 cm (2") wide masking tape around the outside of the collar so that at least 2 cm (1") of the tape is above the rim of the collar, creating a masking tape dam. This will be the top portion of the mold. Make sure the tape is adhered to the collar with no openings along the collar's perimeter. See Figure 5.

The masking tape completes the mold building process. If your boat has no deck collar but only a partner opening, build a low dam, using the modeling clay, around the opening so that the SPARTITE can overflow the lip of the partners to a distance of 1 cm (1/4") and a depth of 1 cm (1/4").

FIGURE 5

\*\*\*\*Note: Don't forget the releasing agent on this area.\*\*\*\*

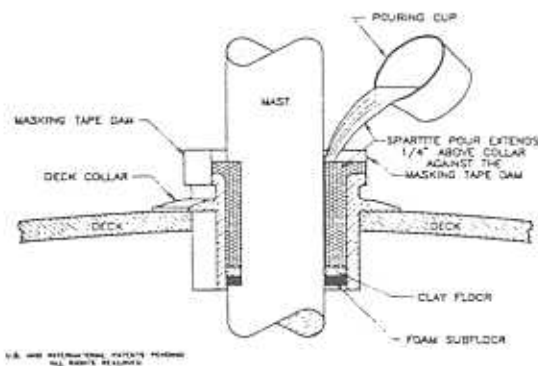
AT THIS POINT, WE RECOMMEND USING THE PLASTIC GLOVES INCLUDED WITH THE KIT AND WEARING EYE PROTECTION WHEN MIXING AND POURING THE LIQUID SPARTITE.

7. Shake the rectangular can vigorously for 1 minute. Open both cans of SPARTITE and pour the entire contents of the rectangular can into the round can. Stir well for one minute. Transfer the entire contents into the disposable pouring cup provided and mix for another one minute. When pouring from the can to the cup scrape the sides of the can in an effort to get all the SPARTITE out.

\*\*\*\*Note: Once the liquid SPARTITE has been thoroughly mixed, pour into your mold cavity IMMEDIATELY. In warm weather the pot life is shortened.\*\*\*\*

8. Pour SPARTITE into the prepared area between the mast and collar. When pouring from the cup it is helpful to squeeze the cup into a spout shape. Properly mixed, SPARTITE pours like molasses. It will seek its own level. For best results, SPARTITE should be poured to a height 1 cm (1/4") above the rim of the partners/deck collar so a lip is formed. The masking tape dam or clay dam will act as the upper portion of the mold and will contain the liquid SPARTITE. See Figure 6.

FIGURE 6



\*\*\*\*Note: If the gap between the mast and the partner is large or the depth of pour requires more than a large kit, the weight of the liquid SPARTITE may cause the floor you made in steps 3 & 4 to break or give way. We recommend supporting the floor from below, or better yet pour SPARTITE in stages letting the first two quarts harden (1 to 3 hours depending on ambient temperature) and act as a support for the rest of the SPARTITE.\*\*\*\*

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9. If it might rain in the next few hours, tape plastic wrap to the mast to create a tent over the poured area. Be careful not to allow the wrap to touch SPARTITE, or to allow water to come in contact with SPARTITE while it is liquid.

10. Once SPARTITE has set up, the modeling clay and foam can either be removed or left in place (you may experience some of the clay running down the mast on hot days). Masking tape can typically be removed after the SPARTITE no longer feels tacky. Depending on how long it's been since you poured and if you did not apply any petroleum jelly to the tape, gently pull at first to ensure the SPARTITE is sufficiently cured to the point where the adhesive won't distort the shape as you pull it off. Where the SPARTITE cures against the masking tape, a fine lip or "flash" is created. This can

be trimmed off with a knife or file.

11. DO NOT PUT STRESS ON THE MAST BY SAILING, OR FURTHER TENSION THE RIG FOR AT LEAST 48 HOURS IN WARM WEATHER AND 3 OR 4 DAYS IN COOL WEATHER FOLLOWING INSTALLATION.

12. Install setscrews to prevent movement of the SPARTITE ring up the mast due to pumping or in case vaseline was applied to the mast. Install setscrews through the deck collar, fore and aft, into the SPARTITE ring approximately 1/4".

13. For longest life, SPARTITE should be painted with a plastic model paint (urethane, krylon or epoxy) or covered with a boot. When the mast is out of the boat and exposed to the sun the SPARTITE ring will weather better if wrapped or covered with rag.

14. To maintain a good water barrier after the SPARTITE has cured, apply a NON-Silicone base caulk (Life Seal by Boat Life works well) to the seam where the mast and SPARTITE meet. Silicone caulk will not adhere well to SPARTITE. If you bend your mast you may need to caulk elsewhere as well. The more you move your rig the harder it will be to keep water out. See instruction 2.

15. Apply the SPARTITE decal to the mast above any boot to notify riggers that this mast is chocked with SPARTITE. When un-stepping remove the setscrews first.

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