

MAINTENANCE CATALOG



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PROCEDURES FOR REFURBISHING TEAKDECKING

1) REPAIRING/REPLACING DAMAGED BOARDS

- A. To <u>repair a small crack</u> in a teak batten, use a razor blade knife to clean and fill the crack with 1:1 TDS Epoxy.
- B. To <u>repair a large crack or chip</u>, router out the damaged area and insert a piece of teak (Dutchman). Fasten with 1:1 TDS Epoxy.

2) **RESEAMING**

NOTE! Under no circumstances should moisture or water be let into the seams during this process.

If the caulking is low or not adhering to the side of the deckplank, reef out the old caulk. The caulk can be removed in any of the following methods:

- 1. Using a <u>razor knife</u>, cut the sides of the caulk and dig out the caulk with a reefing hook.
- 2. A <u>router or a circular saw</u> can also be used to cut the seam clean. (<u>This method requires more skill</u>).

When finished, make sure both sides of the seam have clean wood at least 1/2" deep. Vacuum all dust from the seams and wipe the seams with acetone before applying the caulk. Use bond breaker (Fine Line Tape) if the seam has a rabbet (See "The Proper Composition of a Caulk Seam" enclosed). Recaulk using TDS SIS 440 (Directions on the tube).

3) **PLUGGING REPAIRS**

Old plugs or cracked plugs can be removed using a small chisel to break them out of the bored hole; re-bore the hole using a hole cutter. If sides of holes are damaged, increase the diameter of the hole saw. Insert new plug, using TDS 1:1 Epoxy completely around the new plug. Plugs and epoxy can be ordered through TEAKDECKING SYSTEMS.

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4) **RESURFACING DECK**

Completely sand the deck using Milwaukee grinder Model #6072 and Diskit soft pad #8051 and sanding disc. These can be ordered through TEAKDECKING SYSTEMS.

NOTE: The grit of the sandpaper to be used depends on the condition of the deck. If the deck is in bad condition, start with 36 grit and finish with 80 grit.

IMPORTANT: To avoid gouging the teak, hold the pad flat to the deck. Vacuum up the dust.

5) **INSPECTING THE DECK**

Hose down the deck with water. As the deck is drying, observe wet spots that do not dry completely. These are areas that may need work, i.e., new plugs, more caulk repair, etc.

6) FINISH ON EXTERIOR TEAKDECKING

We do not recommend any finish on exterior teakdecking in the Caribbean sun, but if it is still requested be sure to choose a brand that does not contain kerosene or other petroleum products. Any sealer containing a petroleum distillate can cause damage to the caulking over time, greatly reducing its' useful life.

Before applying any sealer, <u>clean teak or other wood items well with TDS TEAK CLEANER</u>. Make sure all grease, dirt, and oil is removed from the teak. After cleaning, rinse the teak thoroughly with fresh water and let it dry. Do not use sealer on a damp or wet surface or in direct sunlight during the heat of the day.

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CAULKING SIS440



"The Professional's Choice"

- 25 years experience
- NO PRIMER
- 18 month shelf-life
- Stays flexible
- Cures rapidly
- Adheres permanently
- Minimum sag and shrinkage
- Highest rated resistance to UV
- Easy to work
- Black, White and Gray







SIS-440 Deck Sealant is a one-part, paste-like neutral cure caulk which, when exposed to moisture in the air, reacts to form a tough, flexible solid rubber compound. The sealant does not sag during cure, and has excellent temperature stability and chemical resistance when cured. Because the sealant is neutral cure, it is non-corrosive to all substrates.

PRODUCT INFORMATION SHEET

SYSTEMS.

SIS-440 TEAK CAULKING

- One-Part Polymer Adhesive/Sealant Neutral Cure
- ➤ No Primer Necessary

<u>SAFETY AND RELIABILITY</u>: During cure, the sealant may irritate eyes. Care should be taken to read all caution labels and statements.

PROPE	S	PHYSICALS							
Color	Black, White & Gray		Durometer (Shore A)		30				
Specific Gravity	1.2		Tensile Strength		300 psi				
Viscosity	Thixotropic Paste		Elongation		350%				
Tack-Free Time	20-40 minutes								
PACKAGING:									
IN CARTRIDGES		IN SAUSAGES		IN 5 GAL. (US) PAIL					
10.3 fl. oz. (305ml)		20 fl. oz. (600ml)		4.5 US gal. (17l)					

SHELF LIFE & STORAGE: Stored at or below 80°F (26°C) in the provided container, the sealant has a shelf life of eighteen months. Product date code on packaging is date of manufacture.

HANDLING SUGGESTIONS:

- 1.) Read and follow instructions printed on the packaging.
- 2.) Paint and varnish do not adhere well to caulking. After sanding, small particles of polymer from teak dust or other dust residue from the caulk may cause 'fisheye' in wet paint. Thoroughly vacuum off teak dust and clean surfaces with proper solvents before painting to avoid paint issues.
- 3.) Should you not completely empty the packaging in which the sealant was shipped, simply extrude approximately 1/8" beyond the tip, let cure, and you have a ready-made plug that can be pulled out easily when use is required again.
- 4.) <u>CLEANUP:</u> Use mineral spirits to clean your hands and tools from caulk. **NEVER USE MINERAL SPIRITS IN TEAK SEAMS** (acetone only).

NOTICE: The information herein is based on data available to us, and is believed reliable. Since the use of this product is beyond our control, there is no expressed or implied warranty of results, or that such use will not infringe on any patents. The product is furnished on the condition that the user will determine its suitability, and that the user assumes all legal responsibility, and that neither seller nor manufacturer shall be liable for any injury, loss, damage or consequential loss, arising from use or inability to use the product. We make no guarantee that the suggested health and safety precautions will be adequate for all individuals and/or situations.

Features SIS440 Caulk







Developed by TDS specifically for teak deck seams

- 25 years experience
- More than 20,000 custom decks manufactured and installed
- 166 miles of caulked seams per year
- Well tested and proven in hot or cold climates
- NO PRIMER NECESSARY

One-part polymer forms a solid rubber compound

- Highest rated UV resistance
- Excellent resistance to chemicals
- Superior temperature stability
- Superior to polysulfides, polyurethanes and MS polymers

Neutral cure

- Non-corrosive to all substrates
- No damage to the surrounding environment / structures

Viscosity

- Thixotropic paste; does not drip or sag
- Easy to work stays flexible

Primer free

- One-step process saves application time
- No solvents
- Environmentally friendly
- Good for work environment

Cure time

- Cures and ready for sanding after 36-48 hours at 68° F (20°C)
- Other products may take 6-7 days to cure
- Decreased turnover time for projects

Shrink / waste

- Minimum sag and shrinkage
- Less waste



Tack-free

- 'Skins over' after 20-40 minutes
- Normally can be walked on next day
- Reduced damage to the caulk before totally cured
- Less repair time required

Sanding

- Easy to sand; Will not clog sandpaper
- Faster project turnover time
- More economical

Shelf life

- 18 month shelf life
- Long shelf life increases product demand
- Economical and easier to sell due to less waste of product

Seam width/depth dimensions

- Use in seams from 3mm to 10mm wide
- First-class appearance
- Seam depth must be greater than the seam width
- Caulk should go to the bottom of the seam
- Bond-breaker tape recommended
- Extended life time for teak decks with full depth caulk seams

Freight / Shipment

- NOT HAZARDOUS
- Ships airfreight or ground
- Reduced cost for freight

Worldwide support

- Worldwide distributors and technical support
- Rapid response to teak decking and caulking questions

www.teakdecking.com

OTHER APPLICATIONS:

Bedding deck equipment / hardware
Bedding teak decking
Caulk seams in other wood decks
Sealing edges around windows
Construction

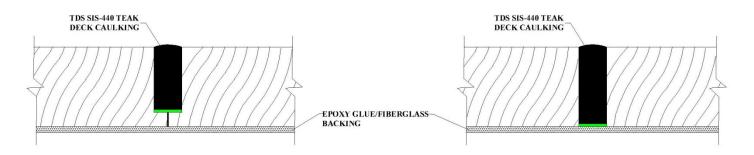
ESTABLISHMENTS USING SIS440 TEAK DECK CAULK:

Boat builders
Boat repair yards
Marinas
Private boat owners
Cruise ships
Ship chandleries

THE PROPER COMPOSITION OF A CAULK SEAM

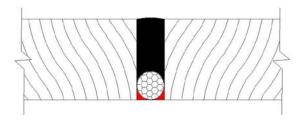
- ➤ <u>Preparation of seam</u> All surfaces of the seam must be <u>dry</u>, <u>dust free</u>, <u>and cleaned with acetone on a rag</u> to remove any contaminants that would thwart proper adhesion. Isopropyl alcohol may be used, but acetone is strongly recommended. <u>Do not</u> use de-natured alcohol, as this will cause separation of the seam from the substrate after curing.
- > <u>Seam design</u> Three sided adhesion will limit the amount of movement that a seam can accept before failing. <u>TDS</u> recommends applying bond breaker tape at the base of every seam to create two-sided adhesion, which allows the sides of the seam to work independently from the bottom, increasing flexibility.
- Complete filling of seam Seam must be completely filled from top to bottom, without voids or air bubbles, allowing sealant to adhere to sides of seam. Please see our sealant application instructions for the proper procedure to minimize chance of seam failure.
- Atmospheric conditions during curing Sealant should be applied at a time of day when the seam surface is cool and will not experience extreme temperature or moisture changes.

SEAM COMPOSITION AS RECOMMENDED BY TDS

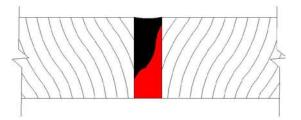


> Use of polyurethane bond breaker tape aids to achieve 2-sided adhesion. The bottom of the caulk seam should be able to move at the base of the seam, as the deck flexes and works.

SEAM COMPOSITION NOT RECOMMENDED BY TDS



> Use of a backer rod does not ensure a good, tight seal at the base of the seam.



A proper caulk seam must be filled entirely to the bottom. This is achieved by forcing the tip of the caulk gun close to the bottom of the seam when filling. Drag a putty knife at a 30 degree angle to smooth the excess caulking into the seam applying pressure to slightly bend the blade. Scrape up the excess caulk leaving the caulk bead proud of the deck.

EPOXIES



"The Professional's Choice"



MAXIMUM BOND STRENGTH

FE-180A Bonding Epoxy is a flexible epoxy, formulated to achieve *maximum bond strength* between teak and most common structural marine materials, such as wood, fiberglass, aluminum and steel. Its primary purpose is to achieve a high strength bond to less-than-perfectly-prepared substrates.

- Maximum Bond Strength
- Excellent wet-out of bonding surfaces
- Best for gluing teak and teak deck panels
- Flexible strength resists shock and twists
- High viscosity holds profile to fill gaps
- 1:1 mix ratio for easy mixing
- Non-blushing
- High density fillers
- Tinted **brown** to compliment most wood species



UNIVERSAL FAIRING & BONDING

FFE-200 Fairing & Bonding Epoxy is a medium viscosity epoxy fairing/bonding compound blended to yield a light weight, flexible and easily sanded system for use as both a fairing compound for uneven surfaces and for bonding teak to faired surfaces.

- Good bond strength
- Excellent fairing material
- Excellent wet-out of bonding surfaces
- Best for vacuum bagging
- Medium viscosity for ease of spreading and leveling
- Flexible strength resists shock and twist
- Light weight fillers for reduced weight and sandability
- 1:1 mix ratio for easy mixing
- Non-blushing
- Good low temperature cure (minimum 45°F, 7°C)



GENERAL, ALL-PURPOSE BONDING EPOXY **AP-100** All Purpose Epoxy is a general purpose, high strength adhesive for general marine bonding applications. Ideal for installing plugs in teak decks or bonding wood or fiberglass composites

- Excellent bond strength
- Excellent wet-out of bonding surfaces
- Flexible strength resists shock and twist
- Translucent color blends well with surrounding surfaces
- 1:1 mix ratio for easy mixing
- Non-blushing

For more information, including more technical data, please visit our products page on our web site at: www.teakdecking.com

SURFACE PREPARATION:

All surfaces must be clean, dry, and free of any dirt, grease, wax, etc., before beginning any surface preparation. Regardless of the substrate, it is mandatory that a sample adhesion test be performed to the primed/sealed surface at least 24 hours prior to the final glue-down.

STEEL

- Sandblast or grind to clean white metal per SSPC-SP63 to a 3-4 mil profile
- Wash with Metal Prep
- Follow primer instructions to clean surface
- Apply 2-3 coats of a commercially approved epoxy primer such as Awl-Grip High-Build,
 Devoe Epoxy Primer or equivalent, adequately filling the blast profile

ALUMINUM

- Sandblast or grind with 24 grit disc pads to a 3-4 mil profile
- Follow primer instructions to clean surface
- Follow with a vinyl wash primer or Alumaprep
- Follow by a mil/spec zinc or strontium chromate corrosion-inhibiting primer
- Follow with AwlGrip High-Build epoxy, Devoe Epoxy Primer, or equivalent

FIBERGLASS/GELCOAT

- Grind with 36-40 grit paper until no shiny surface is present
- Wipe down with acetone

WOOD

- Scuff with 36-40 grit paper
- Do not use polyester resin or wood sealers that contain oils

FAIRED SURFACES

- Seal fairing compound with a high-quality, 100% solids epoxy
- After complete cure, aggressively sand before bonding

MIXING INSTRUCTIONS:

- Stir both A & B components before combining
- Mix by volume: 1 part base resin with 1 part activator
- Mixing MUST be thorough to ensure a good cure. Scrape the sides of the container until you have achieved a uniform color with no streaks
- DO NOT ADD ANY FILLERS OR REDUCER

FE 180A: PROPERTIES	VALUE	FFE 200: PROPERTIES	VALUE	AP 100: PROPERTIES	VALUE
Gel Time (8-oz Mix)	70 Minutes	Gel Time (8-oz Mix)	75-80 Minutes	Gel Time (8-oz Mix)	35-40 Minutes
Open Time – 3/16"	120-130 Minutes	Open Time – 3/16"	60-70 Minutes	Open Time – 3/16"	60-70 Minutes
Film Set Time – 3/16" @ 77°F	6 Hours	Film Set Time – 3/16" @77°F	4 Hours	Film Set Time – 3/16" @77°F	4-6 Hours
Film Set Time – 3/16" @ 40°F	12 Hours	Film Set Time – 3/16" @ 40°F	10 Hours	Film Set Time – 3/16" @ 40°F	12 Hours
Adhesion to Teak	Substrate Failure	Adhesion to Teak	Substrate Failure	Adhesion to Teak	Substrate Failure
Adhesion to Phenolic	Substrate Failure	Adhesion to Fiberglass	Gelcoat Failure	Adhesion to Fiberglass	Gelcoat Failure
Adhesion to Aluminum	>400 psi	Adhesion to Aluminum	>300 psi	Adhesion to Aluminum	>300 psi
Adhesion to Steel	>450 psi	Adhesion to Steel	>350 psi	Adhesion to Steel	>350 psi

As with all epoxies, Teakdecking Systems' epoxies can cause skin and eye irritation with frequent or prolonged exposure. Avoid contact with skin and eyes by the use of gloves, goggles, impervious clothing and barrier creams.

Our epoxies will be usable for up to 12 months under proper storage conditions (50-95° F) in a sealed container. Prolonged storage may cause the hardener to darken. After prolonged storage, it is advisable to test a small mix to make sure it is viable. Be sure to pre-mix the individual containers before testing. Freezing may cause crystallization in the resin side. If this occurs, warm to 130-150° F and stir to melt crystals. The resin's properties will be unaffected.

TEAK CLEANERS

"The Professional's Choice"









ECO-100

- 100% Environmentally safe: nontoxic
- Concentrated Dilute with water
- No acid, caustic sodas or phosphates
- Kills mold & bacteria
- Tough on dirt, gentle on teak
- Economical cleaning solution
- Cleans & brightens
- Meets the Clean Marina Program

TCL-200

- Environmentally and user friendly
- Pre-mixed and ready-to-use
- Contains no acid
- Tough on dirt, gentle on teak
- Perfect for oil, soot & fish blood stains
- Cleans & brightens

ECO-300

- 100% Environmentally safe: nontoxic
- Pre-mixed and ready-to-use
- No acid, caustic sodas or phosphates
- Biodegradable
- Tough on dirt, gentle on teak
- Adheres to the scrubbing pad
- Cleans & brightens
- Meets the Clean Marina Program

ECO-100 Teak Cleaner Powder is a new high performance, concentrated teak cleaner. Even though ECO-100 Teak Cleaner Powder contains no acid, caustic sodas or phosphates, it is a very powerful and effective cleaner that cleans and brightens without removing the soft fibers of your teak. It mixes easily in water. This product has been formulated to be 100% environmentally-friendly and represents the most advanced truly "green" teak cleaner powder in the marine industry today.

TCL-200 Teak Cleaner Liquid is a low-toxicity, acid-free cleaner that comes in an easy to use, pre-mixed formula. TCL-200 is specially formulated for the marine environment and is excellent for removing dirt and heavy stains, particularly oil, soot and fish blood stains. Gentle enough to be poured directly on the teak, just scrub it and rinse off. TCL-200 is perfect for those quick, bucket-free clean-up jobs or as part of a general wash down when you just want to brighten or freshen up your teak without taking the time to mix a special teak-cleaning solution.

ECO-300 Teak Cleaner Liquid has been formulated to be 100% environmentally-friendly and represents the most advanced teak cleaning liquid in the marine industry today. It contains no acid, caustic sodas or phosphates and is non-toxic to the user. ECO-300 Teak Cleaner Liquid is a new ready-to-use cleaner that cleans and brightens teak better than harsh chemical cleaners, restoring its original golden color. All ingredients are approved by the National Sanitation Foundation and meet requirements for a truly "green" teak cleaner liquid for the marine industry.



HOW TO CLEAN TEAK

A major portion of TEAKDECKING SYSTEMS' business is replacing existing teak decks that have been worn out through improper maintenance. Amazingly, many of these decks were destroyed not through neglect, but because their owners cleaned them too often and too thoroughly.

Overuse, or improper use, of two part caustic acid cleaners shortens the life of teak decks by actually eating away the teak. These cleaners should only be used when everything else has been tried. If they must be used, follow their instructions carefully. If you need to use such cleaners, protect your skin (hands, arms, bare feet, legs, and eyes). The caustic cleaner will also attack surrounding paint. The paint can be somewhat protected by wetting down the surfaces before starting and continuing to flush them during the cleaning process. Remember to flush topsides below scuppers and drains to prevent damage to the paint as the deck drains down the side of the hull. After using a two part cleaner, be sure to rinse the deck thoroughly. Any remaining cleaner will continue to "eat" the teak and surrounding surfaces. Remember – it is an acid.

Clearly, we do not recommend two part acid cleaners. TEAKDECKING SYSTEMS has developed three **eco-friendly** acid-free cleaners that are designed to be thorough, yet gentle. Please review the product labels or our web site to determine which product is best for your application. These cleaners can be obtained from one of our distributors, or directly from TEAKDECKING SYSTEMS. DO NOT USE CHLORINE BLEACH in an attempt to bleach the decks. Chlorine will attack most caulking products, turning them to goo.

The wood should be scrubbed <u>across the grain</u> with a soft scrubbing pad or a soft bristle brush. Scrubbing with the grain tears the soft grain out of the planks, leaving the surface rough. A rough, weathered deck exposes more of the wood to environmental deterioration. On larger areas, use of rotary cleaning machines with dispenser tanks and soft bristle brushes is appropriate.

Even with care, in time the surface of the wood will become uneven. When this happens, the deck should be lightly sanded with a sanding machine to smooth the surface. This will actually increase the life of the deck by exposing less wood to the elements and preventing the grain from trapping dirt or air-borne corrosives.

After the deck has been cleaned and flushed, notice any areas that remain wet after the rest of the deck has dried. Wetness may indicate a spot where the caulking in a seam has broken away from the teak, or a plug has gone bad. If so, these failures should be repaired immediately to prevent water from getting under the deck. Once water is under the teak, a number of things can happen, and none of them are good. If you can't make an immediate repair, duct tape the opening to seal it temporarily.



See our "How to Clean Teak" video on our Products page at: www.teakdecking.com



CAUTION

WARNING AGAINST USE OF ACID CLEANERS/RUST REMOVERS ON TEAK DECKS

Generally, rust cleaners contain acids—either in liquid or powder forms, which can vary greatly in strengths in accordance with the application intended for the product. Acids are also classified as either organic or mineral, <u>i.e.</u>, <u>oxalic acid is an example of organic and phosphoric acid is an example of a mineral acid.</u> Both of these substances are commonly used in rust cleaners.

Acids may have the effect of softening the caulking in the seams of our panels and the resulting softening will lead to seam failure over a period of time. Once a crack opens between the seam and the wood, it allows cleaning solutions to collect in the cracks where it cannot be easily rinsed out, and seam failure accelerates.

The "cleaning" action of acids appears to be very effective, because the acid actually removes some of the material being cleaned—in our case, the wood and the caulking. Over time, enough material may be removed to compromise the integrity of the wood where it meets the caulking seam, causing a crack, which, as described above, accelerates the failure of the adhesion of the caulk to wood.

Additionally, unless the acid cleaning solution is neutralized (by rinsing with an alkaline solution after it is applied) the corrosive action of the acid may continue for some time, even after the solution is dry. Rinsing with water is not sufficient to stop this action.

As part of a regular maintenance program, TDS Powdered Teak Cleaner can be used on a weekly basis. This cleaner is very effective as a general purpose cleaning agent, especially when used with hot water, and is environmentally safe as well as user friendly, since it is completely biodegradable and contains no acids, caustics, or bleaches.

We recommend that a non-corrosive alkaline cleaner, such as TDS LIQUID TEAK CLEANER be used on a monthly basis. This product contains a very effective degreasing agent for cleaning teak decks and is very efficient for stubborn stains such as soot, grease or oil. The cleaner can be applied full strength on the areas affected and allowed to work before the entire deck is cleaned. This product is also biodegradable and non-hazardous to the environment or user when used as directed.

In no case can we recommend the use of acid type cleaners for cleaning wood decks, even if mixed with alkaline cleaners. Use of acid cleaners will invalidate warranties on our decks.

The above information is based on our years of experience in maintaining teak decks and the principles of basic chemistry. While it is not intended as a scientific study, we believe it to be accurate and solidly based.

TEAK OIL

We do not recommend the use of oils on exterior teakdecking. Teakwood contains natural oils and to treat the decking with oil is not at all necessary. If the use of an oil or sealer is preferred for cosmetic reasons, do not use oils containing kerosene or other petroleum products, which will damage the caulking. Check ingredients carefully.



PROFESSIONAL TOOLS

"The Professional's Choice"



Removes caulk or other flexible materials from seams



Sands seam sides before caulking seams.



Re-caulks using sausages

TDS REEFING HOOK

This tool is for removing caulk or other sealants from a seam. A razor knife should be used to free the caulk from the sides of the seam. The reefing hook will remove most of the caulking, leaving minimal material for final hand sanding - with the TDS Seam Sander.

- Specially designed, stainless steel construction
- Comfort-fitting rubber handle
- Specially designed for long service
- Different sizes can be made to order

TDS SEAM SANDER

Designed for vertical sanding of the sides of seams to remove old material before re-caulking, the TDS Seam Sander ensures the best possible preparation for new caulk to bond to the teak. Use it to remove final residue of caulking, leaving a totally clean surface for the new caulk to bond to.

- Specially designed and constructed for long service life
- Professional in ease and speed of operation
- Made of the finest quality steel and hardwood
- Manufactured with a comfortable smooth grip
- Adjustable depth sanding surface from 5mm to 22mm (3/16" 7/8")
- Kit consists of handle, sanding surface & six sanding pads

SAUSAGE CAULKING GUN

Our SIS440 Deck Caulk is also available in 20 oz sausages. The sausage takes a special caulk gun which TDS offers, to make sure you are able to enjoy the convenience and earth-friendly packaging of the caulk sausage.

- High quality
- Faster for large jobs
- Less changing out of cartridges
- Better for the environment
- All that's left is a small round disk.