MAINTENANCE OF TEAK DECKS

The teak deck changes its color during exposure to the sun and will weather in time to a silver patina. The resulting greyish brown is sometimes wished. In such case we recommend to clean the deck surface regularly with Sika® Teak Cleaner. Use a sponge or a brush and work always it the direction of the wood grain. In warm climates this procedure should be carried out every day. Bleach, strong acids and aggressive chemicals should not be used at any time.

To maintain the colour and appearance of a new teak deck, Sika offers a maintenance system: Sika's Teak Maintenance System is fully compatible with Sikaflex®-290 DC PRO caulked teak decks.

Sika's Teak Maintenance System consists of the following:

SIKA® TEAK C+B BIO
This remove dirt, salt residue and oily pollution, as well as algas and it brightens natural weathered teak

Apply directly to either wet or dry teak using a scrubbing brush and/or a cloth. Work always it the direction of the wood grain. Leave for 10 minutes before rinsing off with fresh water.
Important: Work in segments to avoid drying or too long reaction time

SIKA® TEAK OIL NEUTRAL
Apply this with a clean rag, brush or roller to dry, cleaned wood and allow the oil to penetrate for about 30 minutes before removing the excess. Reapplication is recommended at the first signs of weathering.

Fig. 28 10 year old teak deck

Fig. 29 New teak deck

Fig. 30 Keep decks looking like new by using the appropriate maintenance products

Fig. 31 The Sika range of teak deck maintenance products

TEAK DECK REPAIR

Most quality timber decks are of teak. For this reason, most of the procedures outlined in this manual are focused on that material.

Deciding whether or not a wooden deck needs to be repaired is not always easy. First, it must be established that a joint has failed or that the wood has been damaged sufficiently to cause a problem.

Each and every joint should be closely inspected. Any points at which there is a small gap or crack in the caulk should be marked with distinctive chalk.

Similarly, the wood surface should also be closely examined for undue wear, gashes, splitting or splintering and should be marked with chalk in a similar way.

However, parts or all of damaged planks should be replaced, according to how badly they are damaged.

If joints are mostly in good condition, but are damaged in one or two places, these can be repaired by replacing the local caulk. More extensive damage, may suggest that all of the jointing would need to be replaced.

The following table shows the recommended responses to the outcome of a deck analysis.

DECK ANALYSIS RESPONSES

Please note that water intrusion between wood and deck may lead to fouling of the wood. It is recommended to control the deck periodically and repair non tight areas before the whole deck is affected or part of the wood detaches from the deck due to the wood expansion with permanent water contact.

HOW TO DETECT UNTIGHT AREAS?

Wood that has become damaged by water trapped in a failed joint becomes more porous than the wood surrounding it. This can result in the damaged wood changing colour. It also means that it will remain wet after the rest of the deck has dried. Wetting the deck and closely examining the areas that remain wet after the rest has dried, is an effective method for identifying problem areas.

Fig. 32 Discolouration of the wood is a tell-tale sign of a failed or damaged joint in this teak deck

	Serious wood damage	Slight wood damage	Wood undamaged
Serious joint damage	Replace deck with new prefabricated or built in-situ deck	Replace all joints, then sand and restore whole deck	Replace all joints
Slight joint damage	Replace damaged joint areas, replace damaged wood areas, then sand and restore whole deck	Replace damaged joint areas, then sand and restore whole deck	Replace damaged joints only
Joints undamaged	Replace damaged wood areas. Sand and restore whole deck	Sand and restore whole deck	Clean the deck. Restore the wood if necessary

Which repair solution will be chosen depends on the state of the deck and the expected result.

DETERMINATION OF THE TYPE OF ADHESIVE WHICH WILL BE REPLACED

In the following part all possible repair solutions are described. However to achieve a perfect result, the chemical composition of the original deck caulking material as well as the elastic adhesive of the planks have to be determined if they are not known.

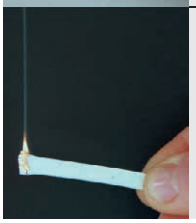
One simple test is to observe the burning behaviour of the sealant or adhesive.

For that a small test piece of the test product will be ignited with a pocket lighter.

The type of flame, the flammability and the smoke gives a good indication of the product base.

Flammable. Yellow flame with an intense black fume and black ashes indicates a polyurethane

Flammable. Yellow flame without black fumes indicates a Product based on Hybrids or MS-polymers



Non propagating light yellow flame with a white to grey fume and white ashes indicates a Silicon based product

If in doubt, consult your local Industry Departement.

IMPORTANT:
Never repair a joint simply by cutting the sealant out and replace it with a sealant unless the chemical base is identical.

REPAIR RECOMMENDATION

If the old joint is soft and sticky we recommend to eliminate the old material completely using a router. Enlarge the joint to ensure a proper wooden surface. After such a removal, **all sealant types** can be newly applied. Procedure of levelling, bonding and caulking of teak decks (see page 6-10).

	NEW JOINT		
OLD JOINT	**PUR**	**MS / Hybrides**	**Silicones**
PUR	Just cut out the defective joint. Pre-treat the surface to be resealed with Sika® Aktivator-100 and leave it for at least one hour before the application of the new sealant	Not recommended	Not recommended
MS or Hybrid	Not recommended	Seek advice from the manufacturer	Not recommended
Silicone	Not recommended	Not recommended	Cut out the defective material, clean with Isopropylic alcohol and seal the joints after 1 hour flash off time

REMOVING OF OLD CAULKING

There are four principal methods for removing old caulking. These are:

- Manual cutting with a sharp knife
- Using an oscillating cutter (Fein Tools) with a chisel-tip blade that is the same width as the joint
- Using an electrically heated rubber-cutting 'rubbercut' tool (Rema)
- Using a router. This method must be used if the old caulking material is not Sikaflex®-290 DC PRO as the sides of the joint will be shaved by the router blade

The method used normally reflects the size and the nature of the job. For a small, one-off job, the manual method would be the cheapest and the simplest method. A large job or a professional repair workshop would likely need to use either the oscillating cutter or the Rubbercut tool for both the time-saving and the quality of the finish.

The router would be used where it is necessary to make sure that there is no residue of the old caulking remaining. This would be especially important when the old caulking material is of unknown chemical composition as it might both have an unwelcome reaction with the new caulking material and have an inferior adherence to the sides of the joint.

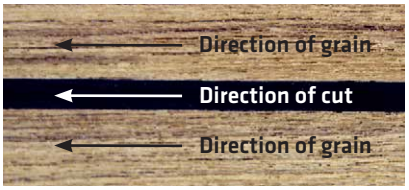


Fig. 33 Always ensure that the direction of cut is with the grain to avoid 'digging-in' damage to the sides of the planks

IMPORTANT:
It is important to take care and ensure that the directions of cut is WITH the grain as shown in Fig. 33

Fig. 34 Using a craft knife to cut along the part of the joint to be removed

REMOVAL WITH A SHARP KNIFE

Insert the blade of a craft knife into one side of the joint perpendicular to the deck surface

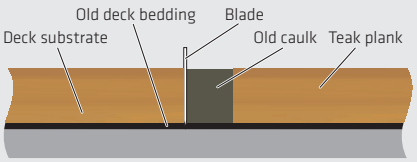


Fig. 35 First cut using blade in left of joint at 90°

Cut along the joint taking care to keep the blade straight otherwise the wood might get damaged, or the old caulking will not be completely cut away

Insert the blade at an angle from the top of one side of the joint to the bottom of the other

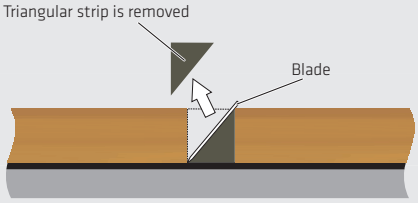


Fig. 36 Second cut using blade in right of joint at about 45°

Cut along the joint taking care to keep the blade at a constant angle This will remove a triangular bead of old caulking along the length of the joint

Insert the blade vertically at the other side of the joint. Once again, care should be taken to keep the blade straight otherwise the wood might get damaged, or the old caulking will not be completely cut away

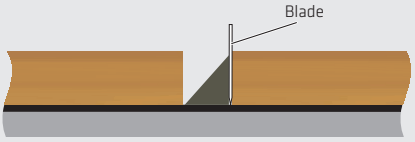


Fig. 37 Third cut using blade in right of cut at 90°

Adjust the blade to cut an opposite diagonal, to remove half of the remaining caulk

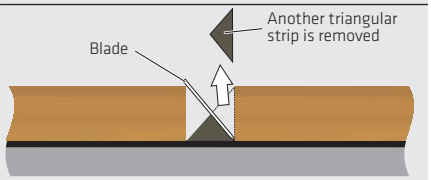


Fig. 38 Fourth cut using blade at about 45° to the left

Remove the 'A' shaped remainder using a scraper of appropriate width. A hand-chisel of the same width of the joint or slightly less would be ideal for this purpose

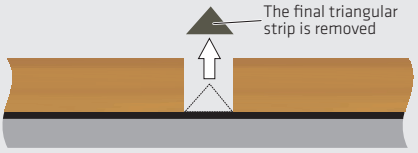


Fig. 39 Fifth cut using a scraper along the bottom of the joint

REMOVAL WITH AN OSCILLATING CUTTER

Switch on the oscillating cutter. Grind the blade with a grinding stone (from the tool manufacturer).


Fig. 40 The oscillating cutter

Insert the blade in the joint and remove it. For this joints it may be necessary to do this in two steps.


Fig. 41 Removal of joints

The cut caulking will be ejected out of the joint with a continuous strip.


Fig. 42 Removal blades

REMOVAL WITH AN ELECTRICAL RUBBERCUT TOOL

Switch on the Rubbercut tool

Exert a pressure to the cutting head in the forward direction. The tip will heat up to a temperature which cuts the old caulking

Insert the tool and advance it along the joint, taking care not to damage the planks at the sides of the joint and in the case of smoking, insert a new cutting blade

The cut caulking will be ejected out of the joint in a continuous strip


Fig. 43 The rubbercut tool

Fig. 44 Blades for rubbercut

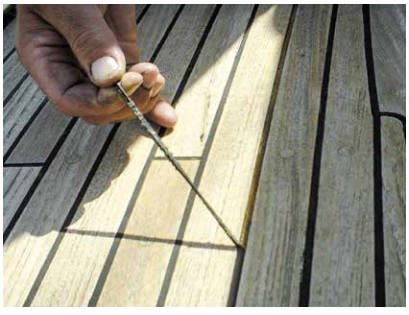


Fig. 45 A triangular cut of the old caulking being removed manually

REPLACING OF OLD JOINTS

Old and damaged or detached sealants should be replaced to prevent water intrusion in between Teak and Substrate. One of the problems could be a incompatibility of the old sealants with the new joint sealant.

The best solution is to remove the old sealant completely using a guided router and the new sealant adheres to the teakwood.

If the old sealant cannot be removed completely, an analyse of the old sealant should be done to detect possible incompatibilities between old and new sealant (see page 15)

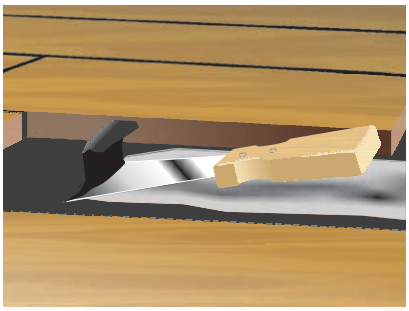


Fig. 46 Old bedding should first be scraped off using a scraper

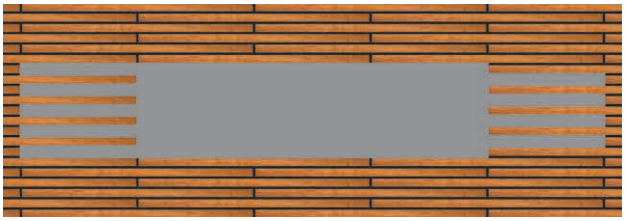
Fig. 47 A useful and effective vibrating scraper power tool

REPLACING DEFECTIVE PLANKS

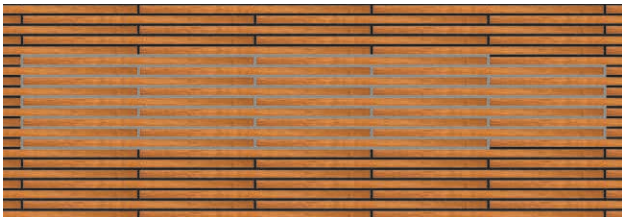
	Completely remove the caulking from the joints around any planks that are to be removed. (See 'Removing Old Caulking' on page 16). Identify the damaged planks with a chalk
	Remove the damaged plank, taking care not to damage the substrate. (If a strong adhesive has been used to bed the plank in place, it may be necessary to destroy the first plank removed in any series. The aperture can then be used to insert a shim beneath adjacent planks to enable their removal if necessary.)
	If only part of the plank is to be replaced. Cut off the damaged area using a vibrating saw. Prepare the new plank to the same dimensions as the damaged one
	Remove any old adhesives, bedding or other foreign matter from the substrate and remove the jointing material from around the edge using a craft knife, a scraper and sandpaper to ensure that the exposed edges are completely free of any residue
	Analyse the type of sealant. (see page 15)
	In case of silicone as original sealant, grind the edge of the planks or better using a router with a guide to assure a complete removal of the old sealant
	Dry fit the new plank to make sure that it will locate and align with the existing planks
	Clean, or if necessary, prime the substrate according to the type of material as described in the appropriate procedure
Primer	Prime all faces of the remaining planking as well as of the new plank (including the hidden side) using Sika® Primer-290 DC or Sika® MultiPrimer Marine
	Drying time: 30 min to 24 h
298	Apply and spread bedding compound Sikaflex®-298 or Sikaflex® -298 FC at the appropriate depth to the sub deck
	Insert the replacement plank, bedding it in place and aligning and levelling it carefully with existing planking
	Hold the new planking in position using weights, screws or wedges
	Allow the Sikaflex®-298 or Sikaflex®-298 FC to cure for a minimum period of 24 hrs
290 DC PRO	Apply Sikaflex®-290 DC PRO caulking, ensuring that no air is trapped in the joints and allowing the compound to slightly overfill the gap
	Slightly overfill the joint. Leave it if the deck will be sanded after caulking or use a spatula at 60° angle to press the sealant slightly into the joint.
	Let the Sikaflex® 290 DC PRO cure as indicated in Fig. 18

IMPORTANT:
If the deck should not be grinded, the joint filling process can be done using masking tapes

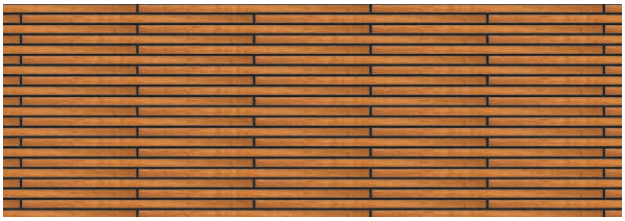
1. Damaged area



2. Removed planks



3. Embedded new planks



4. Repaired deck

Fig. 48 Cutting planks with vibrating knife

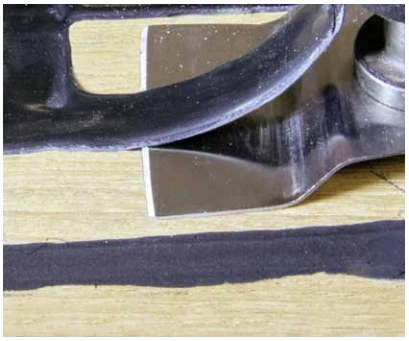


Fig. 49 Picuture Removal overstanding Sikaflex®-290 DC PRO with a vibrating scraper power tool

Fig. 50 Belt sander

SANDING OF THE DECK

	To reduce sanding time we recommend to remove most of the hardened bead of Sikaflex®-290 DC PRO with an electric vibrating scraper
	For efficient sanding results, use an industrial sander. It is recommended to begin with a medium paper at about 80. Suitable sanders are belt sanders, flat plate, or elastically suspended sanders
	Connection areas may be sanded with a palm sander (see Fig. 51)
	When the surface is uniformly smooth. Change the sanding belt to 120 grit and re-sand the whole area again, keeping the sander aligned with the wood grain as much as possible
	Remove all dust with a vacuum cleaner

REPLACING THE WHOLE DECK

In such case the wood has to be removed and the deck has to be cleaned. Sanding or sandblasting has to be done down to the original substrate. Then install a new deck as outlined in chapter “PROCEDURE OF LEVELLING, BONDING AND CAULKING OF TEAK DECKS”, pag. 6 and chapter “PREFABRICATED TEAK DECKS”, pag. 11.

Fig. 51 palm sander