

Teak deck caulking with Sikaflex®-290 DC

Teak decks

Nothing can beat teak decks for beauty, life expectancy and antislip properties. Teak however does come in different qualities, caused by differences in concentration of oils, fats, resins and chinks as well as in different grades of porosity. Moisture content also varies depending upon local climatic conditions and method of storage.

The following pages detail the correct procedures for laying, preparing and caulking teak decks with the Sikaflex®-290 DC system. Following these guidelines to the letter will result in a watertight teak deck which you can enjoy for years to come. You will have to provide good workmanship along with a sound knowledge of timber and basic skills in deck caulking - the end result will be a reflection of your meticulous preparation, application knowledge and the high quality of the Sika deck caulking system.

Ideal working conditions

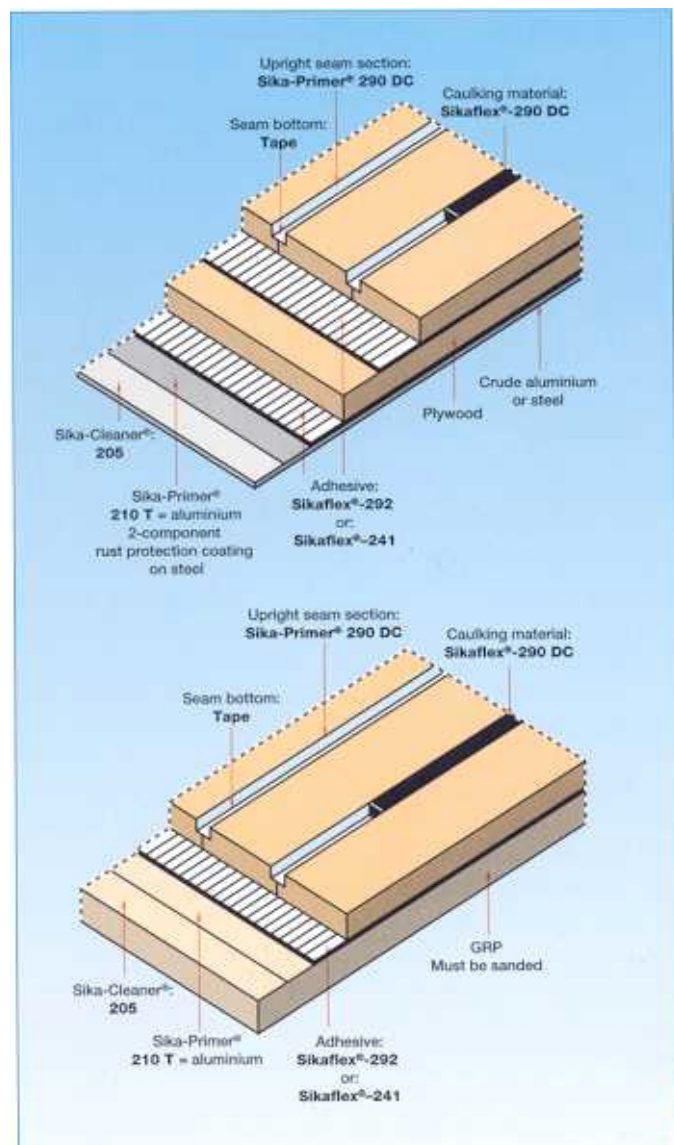
Working conditions directly affect both the adhesive results and the overall workmanship. To achieve the best results, working temperatures should be between + 5°C (40°F) and + 25°C (75°F). Temperature should also be kept constant (or better decreasing) over the installation time period. Moisture content in the wood should ideally be below 12%, however should not exceed 14-15% to ensure good adhesion. Both primer and polyurethane can be adversely affected by direct sunlight or water exposure early in the application process. It is therefore strongly recommended that the entire application process be protected from direct sunlight and adequate ventilation provided. For the best results, the entire area to be bonded should be sheltered for several hours before you begin.

Laying teak decks

As a rule, teak decks tend to be laid on a foundation of steel, plywood, aluminium or polyester. The foundation should be clean, dry and degreased prior to laying the teak sections. Untreated aluminium, steel and abraded polyester should be degreased with Sika-Cleaner® 205.

You may begin applying the first primer coat after 10 minutes. Use for aluminium and polyester Sika-Primer® 210 T (drying time 30 minutes). For steel a 2-component rust protection coating is common practice.

Subsequently you may continue by applying Sikaflex®-241 to bond the deck to the foundation.



Should the foundation present larger gaps or indentations, Sikaflex®-292 will offer superior filling qualities. Teak sections should be placed in position prior to skin formation on the relevant adhesive. Teak sections are secured into position either by mechanical means or pressed down by balanced weight distribution.

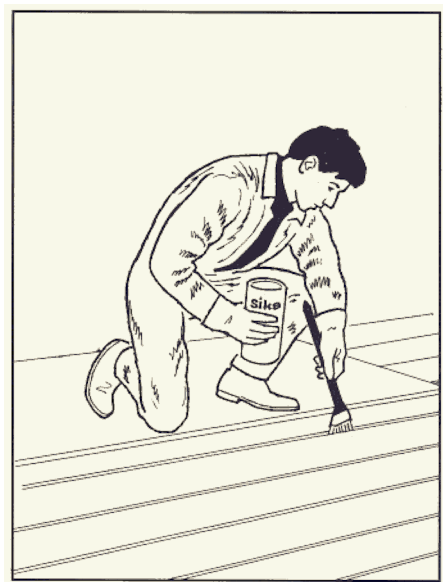
The time needed to keep timber sections down is directly related to the curing time of the adhesive as well as the relative ambient humidity and the grade of teak used. Consult the appropriate technical data sheet for details on curing time.



Routing seams



Cleaning teak deck



Priming decks

Routing seams

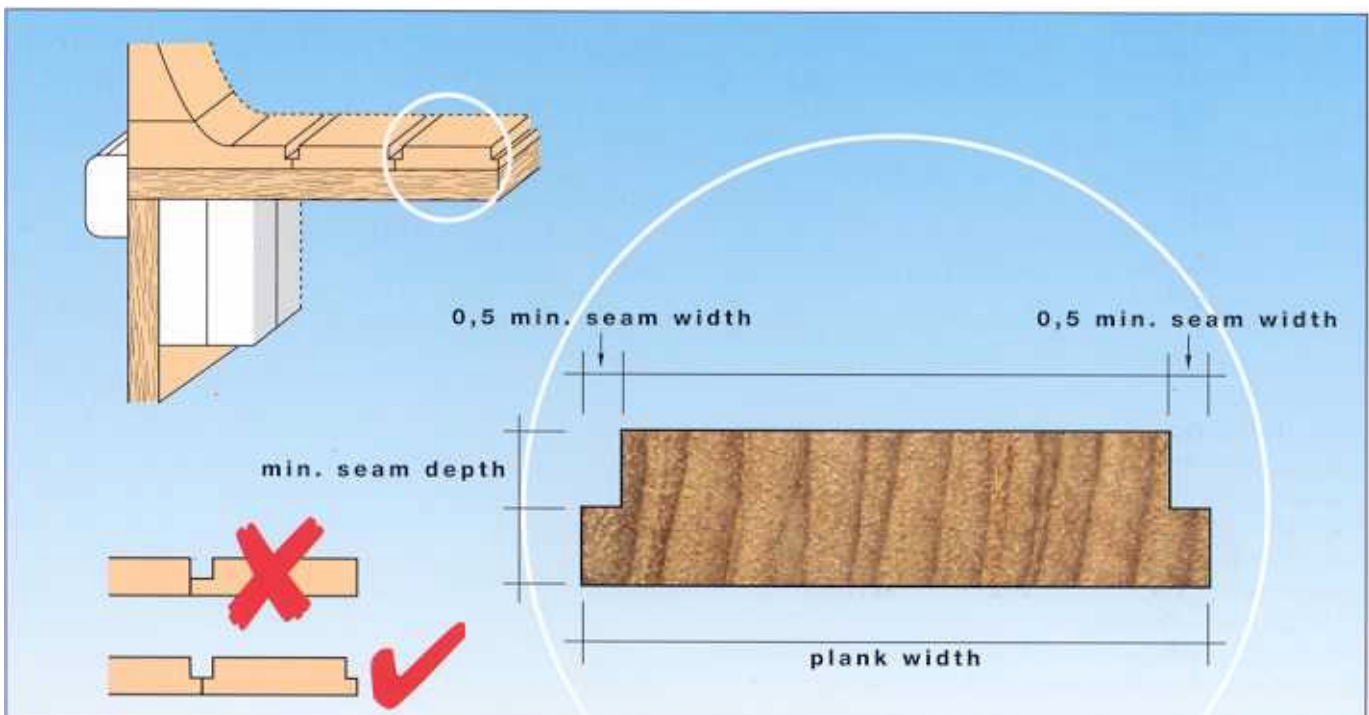
It is imperative that seam widths are directly related to the width of the teak deck sections. Guidelines are listed below. Should joint dimensions not conform, then keep to the relevant minimum size indicated for routing purposes.

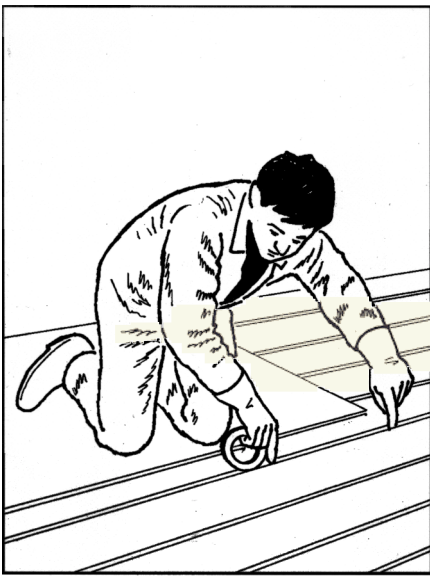
Guideline for seam dimension:

plank width (mm) (in)		seam width (mm) (in)		seam depth (mm) (in)	
35	1 3/8	5	3/16	5 to 6	3/16 to 1/4
45	1 3/4	5 to 6	3/16 to 1/4	6	1/4
50	2	6 to 7	1/4 to 9/32	6	1/4
75	3	10	13/32	7	9/32
100	4	12	15/32	8	5/16
125	5	16	2/3	10	13/32

Cleaning teak deck

To achieve long lasting adhesion to the inside of the deck seams requires meticulous preparation of the seams. All foreign material must be removed and the seams must be clean and dry prior to caulking. Good results can be obtained by using a high powered industrial vacuum cleaner. Pneumatic machines should not be used unless equipped with oil separators, as teak readily absorbs oil. Grooved side sections must be thoroughly de-oiled. This can be accomplished with a lint-free cloth dipped with acetone or MEK (Methyl Ethyl Ketone). The cloth must be replaced at regular intervals to avoid soiling the seam with a dirty cloth. Allow 10 minutes for the cleaner to flash off. Remember - these solvents are flammable, so take the proper precautions!





Release tape application



Deck caulking procedures



Deck sanding

Priming decks

Priming may commence after thorough cleaning and de-oiling. Sika-Primer® 290 DC is to be brush applied in **one** coat to seam side sections. To ensure that no areas are missed, move the brush back and forth. The primer coating should look glossy and present a “wet-look”.

Protect the wet primer against dust and rain, and leave the primer for at least one hour before starting the deck caulking. Beware: maximum time allowable between priming and caulking should be no more than 24 hours.

Release tape application

Deck caulking material is designed to absorb the side to side movement of the teak decking as it expands and contracts with changes in weather. To ensure proper performance, it is imperative that adhesion to the bottom of the seam section is avoided at all cost. To accomplish this, a strip of release tape is applied to the bottom of the seam after the primer has dried.

Deck caulking procedures

As soon as the primer is dry and the release tape has been applied, deck caulking with Sikaflex®-290 DC may begin. The best, long lasting results are obtained by preventing any air from entering the seam using the simple technique of placing the nozzle tip against the seam-bottom while positioning the cartridge vertically (see drawing). (Note: for this application always use a hand gun or piston-driven airgun and fit new nozzles for every new cartridge). This will ensure the joint being filled from the bottom upwards. Pull the cartridge along the seam as the joint fills up behind the nozzle. You will achieve the best results when the following points are observed:

- Wood temperature not to exceed 25°C (75°F).
 - Operating temperatures during application should be constant or falling between 5°C (40°F) and 25°C (75°F).
 - Filled seams are protected from rain and sunlight for 8 hours.
- The deck caulking material will be fully cured between 4-7 days, depending upon the ambient temperature and humidity.

Deck sanding

Excess caulking material may be removed by chisel, and subsequently sanded after 4 to 7 days. This procedure will avoid excess pull being exposed to seam-edges during sanding operations later on. For effective results use an industrial sander with a medium to fine abrasive belt (grit 80 or finer) along the seams.

Take care not to pull the cured caulking away from the sides.

Finish

Although not required, many boat owners prefer to add a lacquer finish to the deck after caulking. However, care must be taken, since many lacquers contain solvents which can adversely affect the cured deck caulking material. You should always test the lacquer on a very small area to ensure compatibility. If any questions remain, do not hesitate to contact your Sika representative. For best results, deck caulking material should be allowed to cure for one month before any finish is applied.

Deck maintenance

It is important to wash and rinse teak decks regularly in order to prevent drying out. In warm climates this should be carried out on a daily basis.

If you have any questions about the application procedure, please contact your Sika Industry representative.