

General Notes for using Achilles CSM fabric

Following are the general suggestions for the application of Achilles' CSM fabric to inflatable boats. Please note that the information listed here is only meant to be used as a general guideline, so that the product manufacturing itself is to be carried out on the basis of the responsibility of the respective manufacturer.

Notes for the cutting process

It is recommended to produce a boat from the single roll. Please register the roll number of the fabric used for manufacturing the boat.

Achilles' fabric is guaranteed for 5 years, however, without the submission of the registration record, the guarantee provided in the agreement will not be applicable. They above are the must for the production administration, we ask you to ensure this accordingly.

Distortion of the fabric sometimes results in twist of the boat. Distortion of the fabric means that warp and woof is not crossed at a right angle. Excessive distortion can cause the twisting of the tube, resulting in difficulty in gluing the tube with transom and FRP base.

As the inherent characteristics of CSM fabric, small distortion is unavoidable. Therefore, please take account of the adjustment of the twisted tube during the production process.

At Achilles, one spot per every roll is picked for inspection of the distortion of the fabric and the result is written down on the defect content sheet. Acceptance criteria for the distortion regulated 80% within 3 cm, 20% within 5 cm per 1 lot (1,000m) for the specification.

The Achilles fabric is dusted with starch powder to prevent sticking of the fabric during the manufacturing process. The starch powder is no harm to the human body.

It is possible to wipe off the starch with the cloth, but it is recommended to leave it and proceed with cutting and fabrication since this is not disturbing the subsequent production process.

Notes for storage

If buffing too strong, the base material inside the fabric may be exposed and the risk of air leaking increases. On the other hand, sufficient glue strength can't be acquired with insufficient buffing.

The sufficient test, training and adjustment are in need.

At Achilles, the fabric is buffed with flap wheel of #80 (grain size) on a hand-held drill at 20,000rpm or slower.

Notes for the adhesion

A variety of factors, such as the thickness of glue, compounding agent used, and drying time, etc., affect the adhesion strength, so that the meticulous care is in need at the time of selecting the method of adhesion.

If you have experience in adhesion between rubbers or between rubber and other parts, please apply the same approach, using the same glue and the same methods.

For your reference, as an example of the glue agent used between Achilles CSM and the fabric, the following condition is presented.

Including these examples, when selecting the glue, please test beforehand and confirm appropriateness of your selection.

glue agent: BOSTIK NE-486

stiffener: BAYER DESMODURRFE

additive: 3-5% to the glue

(Please note that the adhesive properties vary depending on the drying and buffing conditions.)

Combination of possible occurrence of migration and preventive measures

The odor of organic (toluene, styrene, etc.) solvent may be migrated.

If the used amount of organic solvent is as small as what is normally used for at the time of the process, the odor will be gone naturally so that there is no need to be worried about migration. However, if the used amount is large, please thoroughly dry till the odor is completely gone then fold and wrap the boat.

When PVC material is used as parts, note that the contact of rubber with the PVC may cause migration of plasticizer in PVC to rubber, which may result in blooming of the rubber. It is recommended to conduct the contact test of the materials planned to be used beforehand and, when the boat is folded and packed, avoid direct contact of rubber and PVC by placing the polyethylene liner between them. Achilles' boat also places polyethylene liner between rubber and PVC when the boat is folded and packed.

Preservation method for fabric

Due to the heavy weight of the fabric, pressure mark may be generated after storage for a long period. When the fabrics are stacked in piles for storage, place the cushioning materials between them to absorb impact on the fabric. Try not to put the force on the surface directly.

It is better that the fabrics are not stacked in piles when stored.