



marine
adhesives & sealants



Info sheet 204

Structural bonding and sealing in the interior and exterior

with Sabatack 750 (XL) and Sabatack 780



SABA Dinxperlo BV

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1. Introduction

The SABA Marine product range consists of various sealing and bonding products for the professional boat and yacht builder. This info sheet provides information about structurally bonding and sealing in the interior and exterior using Sabatack 750 (XL) and Sabatack 780.

2. Choice of product

SABA offers three products with different viscosity, skin time and final strength properties for creating interior and exterior structural bonds and seals.

Sabatack 750 is a 1-component construction adhesive and sealant based on MS-Polymer. The main application for this sealant is light bonding with a high final strength. In addition, it is also suitable for sealing seams, joints and overlaps. Sabatack 750 offers medium viscosity with a high modulus. It has a skin time of approximately 12 minutes. Sabatack 750 XL offers an extended skin time of approximately 30 minutes; this is especially suitable for use on larger structures and/or in warmer environments.

For applications where a high initial strength and a high final strength is desired, Sabatack 780 is the answer. Sabatack 780 has the same basis and advantages as Sabatack 750 but distinguishes itself by its high viscosity. Depending on the application and personal preference of the user, the three products can be used for many different interior and exterior applications (see Section 4 for more information concerning the possibilities).

Sabatack 750, Sabatack 750 XL and Sabatack 780 are certified by Germanischer Lloyd, ISEGA and Wheelmark. Sabatack 750 (XL) is also WRAS certified.

| Technical data | Sabatack 750 | Sabatack 750 XL | Sabatack 780 |
|------------------------------|-------------------------------------|-------------------------------------|-------------------------------|
| Skin time | approx. 10 minutes | approx. 15 minutes | approx. 8 minutes |
| Open time | approx. 12 minutes | approx. 30 minutes | approx. 10 minutes |
| Tack free | after approx. 4 hours | after approx. 4 hours | after approx. 4 hours |
| Viscosity | medium | medium | high |
| Hardness Shore A | approx. 55 | approx. 55 | approx. 55 |
| Cure rate | approx. 3 mm/24 hours | approx. 3 mm/24 hours | approx. 4 mm/24 hours |
| Modulus at 100% | approx. 1.5 N/mm ² | approx. 1.5 N/mm ² | approx. 1.5 N/mm ² |
| Tensile strength | approx. 2.6 N/mm ² | approx. 2.6 N/mm ² | approx. 3.0 N/mm ² |
| Elongation at break | approx. 330% | 330% | 350% |
| Paintable based on test data | yes | yes | no |
| Temperature resistance | -40 °C to +120 °C | -40 °C to +120 °C | -40 °C to +120 °C |
| Working temperature | +5 °C to + 35 °C | +5 °C to + 35 °C | +5 °C to + 35 °C |
| Certificates | Germ. Lloyd, WRAS, Wheelmark, ISEGA | Germ. Lloyd, WRAS, Wheelmark, ISEGA | Germ. Lloyd, ISEGA, Wheelmark |



3. Working method

Note:

- When applying the products, protect your work from sunshine and rain.
- Work in a draught- and dust-free area.
- The air temperature during product application must be at the minimum 5 °C and at the maximum 35 °C.
- The temperature of the surfaces to be bonded must be at least 3 °C above the dew-point. The dew-point can be derived from the air temperature and the air humidity.
- Consult the SABA Marine pre-treatment table for the cleaners and primers to use.
- Wear (latex) gloves to prevent oils from the skin getting onto the surfaces to be bonded.

3.1 Pre-treatment

3.1.1 Cleaning and degreasing the surfaces to be bonded

Completely remove any old layers of adhesive, thus creating two clean bonding surfaces. In addition, the bonding surfaces must be free of contamination, including oils, grease, corrosion, mill scale and dust.

Degrease the bonding surfaces using a cleaner. The choice of cleaner depends on the type of surface. The products to use for pre-treatment are listed in the SABA Marine pre-treatment table. Use a (lint free) clean cloth or roller to apply the cleaner.

Note:

- Allow the cleaner to evaporate thoroughly.
- Degrease new polyester several times. Allow substances to evaporate thoroughly from the substrate (it must be free of styrene).
- To achieve a better mechanical bond on the substrate, we recommend that it be lightly sanded and degreased.

3.1.2 Taping up

By taping around the joint using masking tape, a smooth joint is obtained and unnecessary cleaning prevented. Remove the masking tape immediately after applying the sealant.





3.1.3 Priming the bonding surfaces

After cleaning and degreasing, the surfaces can, if applicable, be primed. The choice of primer depends on the type of surface and can be determined by using the SABA Marine pre-treatment table.

Apply a thin, even layer of primer to the surface using a brush or a primer applicator.

Note:

- Allow the primer to evaporate thoroughly.

3.1.4 Application method

When applying the 1-component products in 600 ml sausages or 290 ml cartridges, use a manual or air-powered gun. After application, use a spatula to smooth out and remove the excess sealant. If required, finish with Sabafinish or another soap/water solution (use a soap that is neutral and acid-free and do not use more than approximately 5% solution in water). Always test in advance whether the soap affects the sealant.

Note:

- The cure rate depends on the temperature and the air humidity.
- In certain situations it can be necessary to fix both parts mechanically in position until the sealant has cured.
- Using large volumes of soap solutions that contain acidic soap or dirty water to smooth the sealant can cause contamination or discoloration.
- When used in dark rooms with a lack of sunlight, Sabatack 750 (XL) or Sabatack 780 may turn yellow.

4. Applications with Sabatack 750 (XL) and Sabatack 780

4.1 Keel-hull joints

Sabatack 780 can be used to create a robust, durable and waterproof seal between the keel and the hull. The application is shown in the drawing below.



Keel-hull joint

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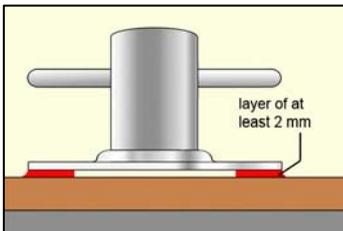


Note:

- Apply a continuous, even bead of sealant with a height of 10 to 15 mm to the bonding surface. To ensure a watertight seal, it is important that there are no interruptions in the bead of sealant.
- Push 5 mm rubber spacers into the bead.
- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.2 Installing deck fittings

Sabatack 780 is extremely suitable for use when installing deck fittings including bollards, clamps, deck filler caps, hatch ring pulls, deck and escape hatches.



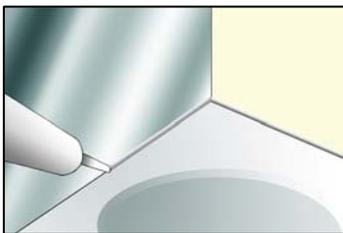
Adhesive must be at least 2 mm thick

Note:

- The layer of adhesive should be at least 2 mm thick.
- When mechanical fasteners are used, 2 mm spacers should preferably be used.
- After 24 hours, tighten the joint mechanically, to create a gasket at least 2 mm thick.
- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.3 Sealing sanitary fittings

Sabatack 750 (XL) and Sabatack 780 are extremely suitable for sealing joints along sanitary fittings. Both products are available in various colours; see the Product Data Sheet concerned. This application is shown in the drawing below.



Sabatack used for sanitary fittings

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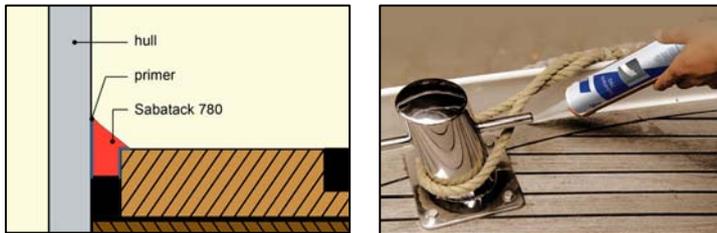


Note:

- When used in dark rooms with a lack of sunlight, Sabatack may turn yellow.
- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.4 Teak-hull connections

Sabatack 750 (XL) and Sabatack 780 can be used to create connecting joints. In general, when making rising and vertical joints, it is nicer to work with Sabatack 780. The dimensions of the joints depend on the coefficients of expansion of the materials.



Creating teak-hull seals using Sabatack 780

Note:

- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.5 Bonding gunwales and bulwarks

Sabatack 780 forms a very good initial bond (immediately fixed) and is therefore extremely suitable for bonding gunwales and bulwarks.

Note:

- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.6 Panel bonds

When bonding horizontal or vertical faces, 'air chambers' must be present in the sealant layer to allow Sabatack 780 to cure (the product needs humidity from the air to cure).

Note:

- Apply to one side and preferably spread using a toothed spreader (4 mm).
- Make multiple beads of adhesive.

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- Create the bond within the open time. The bond can then still be corrected. Due to the high initial bond, the bonded materials can be worked on almost immediately after the bond has been made.
- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.7 Bonding and sealing rubbing strips

Rubbing strips can be bonded and sealed using Sabatack 750 (XL) and Sabatack 780.



Note:

- Apply a continuous, even bead of sealant with a height of 10 to 15 mm to the bonding surface. To ensure a watertight seal, it is important that there are no interruptions in the bead of sealant.
- Push rubber spacers a minimum of 2 mm thick into the bead.
- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

4.8 Sealing frames and profiles

Sabatack 750 (XL) and Sabatack 780 are extremely suitable for sealing joints along frames and profiles. Both products are available in various colours; see the Product Data Sheet concerned.



Note:

- For the correct pre-treatment of the surfaces, consult the SABA Marine pre-treatment table.

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5. Repair and maintenance

Remove the remains of old sealant and adhesive entirely. Then build up an entirely new bond or seal.

6. Pre-treatment table

For the correct pre-treatment of the surfaces to be bonded, please consult the SABA Marine pre-treatment table.

7. References

- Safety Data Sheet Sabatack 750, Sabatack 750 XL, Sabatack 780
- Product Data Sheet Sabatack 750, Sabatack 750 XL, Sabatack 780
- SABA Marine pre-treatment table



SABA Marine work list

A. Project details:

Activities performed by:

Date:

Location:

Project name:

Project no:

Any 'previous' sealing system (only when replacing the old seal):

B. Pre-treatment:

| Product | Charge number(s) | Explanation |
|--------------------|------------------|-------------|
| Sabaclean 21 | | |
| Sabaclean 48 | | |
| SABA Primer Marine | | |
| SABA Primer 9002 | | |
| SABA Primer 9102 | | |

C. Products used:

| Product | Packaging | Number | Charge number(s) |
|-----------------|-----------|--------|------------------|
| Sabadeck | | | |
| Sabadeck Fast | | | |
| Sabacaulk | | | |
| Sabatack 720 | | | |
| Sabatack 750 | | | |
| Sabatack 750 XL | | | |
| Sabatack 760 | | | |
| Sabatack 760 XL | | | |
| Sabatack 780 | | | |

D. Measured application conditions:

| Activity | Bonding | Priming | Sealing |
|--------------------------------------|---------|---------|---------|
| Time | | | |
| Air temperature (°C) | | | |
| Relative air humidity (%) | | | |
| Dew-point (°C) from table | | | |
| Temperature of bonding surfaces (°C) | | | |
| Humidity of bonding surfaces (%) | | | |

Work situation: open air conditioned

E. Situation sketch / comments:

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