



marine
adhesives & sealants



Info sheet 208

Bonding windows

with Sabatack 760 (XL)



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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 describes how windows on yachts and boats can be bonded using SABA products.

2. Choice of product

Various types of glass and synthetic windows are used in boat and yacht building. To accommodate the movement of materials, the windows must be bonded using a highly elastic product. For this specific application, SABA has developed two deep-black sealants that offer a high initial bond; Sabatack 760 and Sabatack 760 XL. The difference between the two products can be found in the application time; Sabatack 760 has a application time of approximately 10 minutes and Sabatack 760 XL has an extended application time of approximately 20 minutes.

Sabatack 760 and Sabatack 760 XL have the following properties:

- high green strength and high initial bond
- high final strength, rapid drying
- primerless adhesion to many surfaces
- UV stable, high temperature resistance
- no blistering
- colourfast and a smooth, flat finish
- resistant to (sea)water, extreme weather conditions and corrosion

3. Working method

Note:

- When applying the product/s, protect your work from sunshine and rain.
- Work in a draught and dust-free area.
- The air temperature during application of the product/s must be at least 5 °C and at the maximum 35 °C.
- The temperature of the substrate 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 onto the skin getting on the substrate.

Before and when applying the product/s, record the conditions, the product/s used, the charge numbers and the activities carried out in the SABA Marine work list. This to guarantee the quality of your project. The SABA Marine work list is included at the back of this info sheet.

3.1 Joint dimensions

Windows in boats and yachts are heavily loaded by the working of the boat, the differing coefficients of expansion of the materials and the climatic conditions including temperature variations and wind. The dimensions of the joint must be great enough to accommodate these loads.

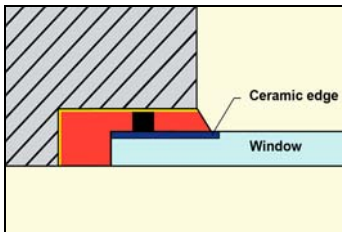


3.2 Protection of sealant layer against UV light

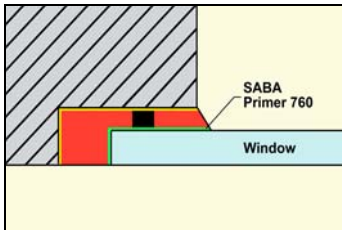
UV light can affect the bond of the sealant on the glass. Therefore it is important to provide the sealant with additional protection against UV light. There are three methods of protection:

- Method 1: a ceramic edge on the inside of the window.
- Method 2: the use of a light-proof primer.
- Method 3: covering edge on the outside of the window.

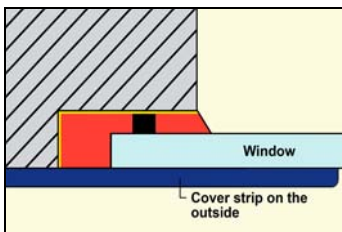
Method 3, covering edge on the outside, offers the best protection. The rule of thumb for this method is that the edge must overlap by at least 2x the glass thickness. The three methods are shown in the drawings below.



Method 1: ceramic edge on the inside of the window



Method 2: layer of SABA Primer 760 on the window



Method 3: covering edge on the outside



3.3 Pre-treatment

3.3.1.1 Cleaning and degreasing the substrate

Completely remove any old sealant layers, thus creating clean bonding surfaces. In addition, the bonding surfaces must be free of contamination, including oils, greases, corrosion, mill scale and dust. Degrease the bonding surfaces using a cleaner. The choice of cleaner depends on the type of window and the rebate. The cleaner to use is 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 thoroughly evaporate.
- Degrease new polyester several times. Allow substances to thoroughly evaporate 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.

3.3.2 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.

3.3.3 Priming window and/or rebate

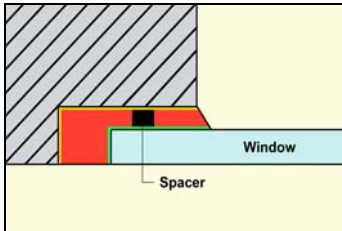
If the window is not protected from UV light by a (black) ceramic trim or a covering trim on the outside, then a light-proof primer must be applied to the window. The choice of the primer for the rebate depends on the type of material. The primer to use for the window and rebate are listed in the SABA Marine pre-treatment table. Apply a thin, even layer of primer to the window and/or the rebate using a brush or a primer applicator.

Note:

- Allow the primer to thoroughly evaporate.
- There are many different types of synthetic window available. SABA recommends performing bonding tests in advance on windows made of synthetic material.
- Optimal adherence of the primer is reached after 72 hours.

3.3.4 Installing spacers

Install spacers between the window and the rebate. This is to prevent the sealant from being 'forced out' and to guarantee a minimum sealant layer. Also install spacers under the window to prevent the window dropping.



Spacers between glass pane and rebate

3.4 Application method

Apply Sabatack 760 and Sabatack 760 XL evenly using a suitable manual or air-powered gun. Use the supplied v-nozzle to obtain a triangular bead of sealant. A triangular bead of sealant reduces the chance of air becoming trapped. When positioning the window, the triangular bead will be compressed to a square joint.

Note:

- The seal around the window is usually made when the window is bonded in place. However, it is also possible to make the seal later.

3.5 Holding in position and allowing to cure

Position the window directly at the right place and hold it in position mechanically or using tape until the sealant has cured. The curing rate depends on the temperature and the air humidity. Immediately after installing the window, use a spatula dipped in soapy water (neutral, acid-free soap, approximately 5 % solution in water) to smooth out and remove any excess sealant.

4. Repair and maintenance

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

Note:

- Take care when cleaning windows using solvents due to the risk of damaging the material. SABA recommends first testing the resistance of the material to the solvent on scrap material.

5. Pre-treatment table

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

6. References

- Safety Data Sheet Sabatack 760, Sabatack 760 XL
- Product Sheet Sabatack 760, Sabatack 760 XL
- 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 sealant):

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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