SELECTION & SPECIFICATION DATA

Generic Type	Tin-free Ablative Matrix Antifouling
Description	Sea~Barrier 3000 is a high-performance, high copper-loading, tin-free ablative antifouling utilising an engineered binder matrix, resulting in the controlled and effective release of biocide during operation over extended service periods. Sea~Barrier 3000 is intended for: * New builds and maintenance docking * Barges & tugboats * Ferries & fishing vessels * Charter vessels & yachts * Multi-season antifouling protection
Features	• High-performance TBT-free (tributyltin-free) antifouling • Self-polishing/ablative mechanism inhibits the attachment of fouling organisms • Excellent static-exposure performance • Controls common types of fouling for periods of up to 36 months, depending on sailing pattern, applied system and other factors • Increased periods between dry docking may reduce operating costs • Case histories report up to five years of protection • Extended two-day overcoating window when applied over Carboguard 545 primer
Color	Black & Red **Note:** Minor batch-to-batch colour variation may occur. Use one batch number per coat, per vessel.
Film Build	75-100 microns dry per coat. *Typically, two spray-applied coats (150 to 200 microns total DFT) are applied for service periods of up to 26 months, depending on sailing frequency, cruising speed and other factors. Refer to the "Limitations" section.*
Solid(s) Content	52% by volume
Theoretical Coverage Rates	6.9m²/litre at 75 microns dry 5.2m²/litre at 100 microns dry Allow for loss in mixing and application.
VOC Value(s)	414 g/l as supplied
Approvals	• Tributyltin-free and organotin-free and, as such, meets the requirements of the International Convention on the Control of Harmful Antifouling Systems on Ships (IMO AFS/CONF.26/18, 18 October 200) • Cybutryne-free and, as such, meets the requirements of IMO MEPC.331(76)
Limitations	**Not suitable for aluminium vessels or stern drives.** **Important Information (Disclaimer)** No antifouling paint can be effective under all exposure conditions. The performance of this antifouling product depends on many factors beyond the manufacturer's control, including but not limited to, variables during application and curing, climatic and environmental conditions (both global and local) during exposure, and acts of nature. We cannot and do not warrant that this product will be suitable for a particular purpose or application, and no liability whatsoever is accepted. Information is provided as a guide only, based on field experience and raft trials, without warranty, express or implied. The user is solely responsible for determining the suitability of the antifouling product for the intended use.

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be sound and free of oil, grease, dirt, loose or flaking paint, moisture and other foreign matter before applying Sea~Barrier 3000. Sea~Barrier 3000 should be applied over a Carboguard 890 epoxy primer/undercoat system.
Previously Painted Surfaces	**Repainting** High-pressure water clean at 330 to 660 bar to remove marine growth, hydrolysed antifouling, salts, loose paint and other foreign matter. Once dry, the cleaned surface should be free of powdered antifouling residue and examined for film defects. Complete coating system repairs before applying any subsequent antifouling coat. Avoid excessive build-up of aged coatings, as these may delaminate over time, compromising antifouling protection and increasing hull drag. Do not apply Sea~Barrier 3000 over aged epoxy primers or build coats. Prepare and re-prime these surfaces with a thin coat of Carboguard 890 or Carboguard 545 before applying the antifouling.
Special Instruction	Sea~Barrier 3000 is designed for application over Carboguard 890, or Carboguard 545 where a longer overcoating window is required. Apply Sea~Barrier 3000 over the primer before the primer has cured hard. Apply Sea~Barrier 3000 when Carboguard 890 is tack-free but still soft under finger pressure. If the epoxy has cured too hard, prepare the surface and apply another thin coat of the applicable Carboguard primer before applying Sea~Barrier 3000. Sea~Barrier 3000 may also be applied over a wide range of existing antifouling coatings, including most cuprous-oxide-containing copolymer types. Existing antifouling must be sound, intact and water-blasted clean before applying Sea~Barrier 3000. Consult StonCor Africa Technical Services for specific compatibility recommendations. **Overcoating:** Sea~Barrier 3000 may be applied over Carboguard 545 up to 72 hours after application at 24°C.

MIXING & THINNING

Mixing	This product contains a high level of cuprous oxide. Thoroughly power-mix before use. Check the bottom and sides of the container to ensure all pigment is incorporated. Stir occasionally during use to re-distribute any settling.
Thinning	Thinning is not normally required, except possibly under hot, windy conditions. If required, use a minimal amount of Carboline Thinner # 12. Additional coats may be required to achieve the specified film thickness. **Note:** The use of thinners other than those supplied or approved by StonCor Africa may adversely affect product performance and void the product warranty, whether express or implied.
Pot Life	N/A - single component

APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

General	Spray application is preferred. Small areas may be brush or roller-applied where conditions are suitable, however, additional coats may be required to achieve the specified film thickness.
Conventional Spray	Pressure pot fitted with dual regulators, a minimum 9.5mm (3/8 inch) I.D. material hose, 1.8 to 2.0mm I.D. fluid tip and an appropriate air cap.

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Airless Spray	Pump Ratio: 30:1 Material Hose: 9.5mm (3/8") I.D. min Tip Size: 0.019" - 0.023" **NOTE:**Heavy-duty airless spray equipment is strongly recommended to achieve the specified film thickness per coat.

CURING SCHEDULE

Surface Temp.	Cure for Service	Dry to Recoat
10°C (50°F)	24 Hours	8 Hours
25°C (77°F)	8 Hours	6 Hours
30°C (86°F)	8 Hours	4 Hours

Times are based on a 100 micron DFT and 50% relative humidity. Higher film thicknes, insufficient ventilation, high humidity or lower temperatures will require longer cure times. The stated values are minimum cure times. The maximum time to launch is indefinite, however, prolonged atmospheric exposure may lead to oxidation and discolouration, with a possible loss of antifouling efficacy. Avoid dry-docking periods exceeding 30 days where possible.

CLEANUP & SAFETY

Cleanup	Use Carboline Thinner # 12
Ventilation	Provide effective ventilation to all parts of the work area throughout the curing period to ensure solvent vapours are removed from the coating and work area.
Caution	• For industrial use only. • Read and follow all caution statements in this product data sheet and on the product label and in the safety data sheet before use. • This product is flammable. Keep away from heat, sparks and open flames. • Use with adequate ventilation. • May cause eye and skin irritation. • Do not breathe vapour or spray. • Wear suitable protective clothing, gloves, eye and face protection.

PACKAGING, HANDLING & STORAGE

Shelf Life	24 months at 24°C, when stored under the recommended conditions in original, unopened containers. For products or components exceeding the stated shelf life, contact StonCor Africa Technical Service for further advice.
Shipping Weight (Approximate)	1.84 kg per litre 5 litre - 9.2kg
Flash Point (Pensky Martens Closed Cup)	37°C
Storage	10 to 24°C in cool, dry, indoor conditions
Packaging	5 litre

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.