C-Flex® 123 AF

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	High performance, tin-free, ablative antifouling
Description	A tin-free antifouling utilizing an engineered binder matrix for the controlled release of biocide to reduce hard fouling between drydocking intervals.
Features	• Provides long-term, fuel efficient protection • VOC compliant • Fast dry, high production application characteristics • Indefinite maximum recoat interval • Compatible with a wide range of antifoulings • Meets IMO standards as a TBT-Free and Cybutryne-Free Anti-Fouling System
Color	Red (0500), Black (0900) and Blue (0100)
Finish	Flat
Primer	Compatible with Carboguard 235, Carboguard 635, Carboguard 890, Carbomastic 15, or other immersion grade barrier coating as recommended by Carboline Technical Service
Dry Film Thickness	4 - 6 mils (102 - 152 microns) per coat Two coats minimum - a third coat optional if longer service intervals are expected.
Solids Content	By Volume 55% +/- 2%
Theoretical Coverage Rate	882 ft²/gal at 1.0 mils (21.7 m²/l at 25 microns) 221 ft²/gal at 4.0 mils (5.4 m²/l at 100 microns) 147 ft²/gal at 6.0 mils (3.6 m²/l at 150 microns) Allow for loss in mixing and application.
VOC Values	Thinner 236 E : 12.8 oz - 3.26 lbs./gal (390 g/l) **As Supplied** : 3.26 lbs./gal (390 g/l) Thinner 10 : 3.62 lbs/gal (434 g/l) These are nominal values and may vary with color

SUBSTRATES & SURFACE PREPARATION

General	All surfaces must be primed with compatible primer and be clean, dry and free of oil, grease, loose mill scale, dirt, dust or other materials which would impair the bond of the product to the substrate. Surface preparation must meet the requirements of the primer being used.
Steel	Refer to the specific primer's Product Data Sheet recommended by your Carboline Sales Representative or Technical Service for surface preparation requirements
Fiberglass	Should be cleaned several times with a fiberglass de-waxer. Sand with 80-grit paper or equivalent to a dull, frosty appearance. Re-wash surface to remove sanding residue and apply 2-3 coats of antifouling.
Non-Ferrous Metals	Refer to the specific primer's Product Data Sheet recommended by your Carboline Sales Representative or Technical Service for surface preparation requirements

MIXING & THINNING

Mixing	This product contains a high level of cuprous oxide. As a result, there is a tendency for settling to occur. It is necessary to thoroughly power mix before using. Check the bottom and sides of the can to ensure all the pigment has been mixed in. It is recommended to pour off half the liquid into a second container and thoroughly mix in any settled pigments. Then remix the two parts together again. Stir occasionally during use to redistribute any settling that may occur during application.
Thinning	Normally not required. May be thinned up to 10% with Thinner 236E (exempt thinner) or Thinner 10 (Xylene).
Pot Life	Indefinite

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.

Spray Application (General)	The following spray equipment has been found suitable and is available from manufacturers. Prior to use, flush all equipment with Thinner #2.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" I.D. fluid tip and appropriate air cap.
Airless Spray	Pump Ratio: 30:1 (min.)* GPM Output: 3.0 (min.) Material Hose: 3/8" I.D. (min.) Tip Size: .017-.021" Output PSI: 1700-2100
Brush & Roller (General)	Spray application is recommended. However, application by roller is acceptable. Use a short nap roller with solvent-resistant core. Avoid re-rolling. Take care to apply uniform coats.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	40°F (4°C)	40°F (4°C)	0%
Maximum	90°F (32°C)	110°F (43°C)	105°F (41°C)	95%

Do not apply when the surface temperature is less than 5°F (3°C) above the dew point. When applying in warm or cool conditions, adjustments to thinning or application techniques may be necessary.

CURING SCHEDULE

Surface Temp.	Dry to Recoat	Cure for Service
40°F (4°C)	12 Hours	12 Hours
50°F (10°C)	8 Hours	8 Hours
70°F (21°C)	6 Hours	6 Hours
90°F (32°C)	5 Hours	5 Hours
110°F (43°C)	4 Hours	5 Hours

These times are based on a 4.0 mil (100 micron) dry film thickness and 40-60% relative humidity. Higher film thicknesses, insufficient ventilation, high humidity or cooler temperatures will require longer cure times. The above times are minimum cure times.
Maximum recoat times are indefinite.
Special Note: Antifoulants shall be applied over epoxy barrier coatings. The optimum time to topcoat with an antifoulant is when the epoxy is “touch-tacky”. If the touch-tacky time has been exceeded you must re-prime the first coat of epoxy with a fresh coat of itself (check specific data sheet). The longer the epoxy has to cure, particularly in sunlight exposure or elevated temps, the higher risk of inadequate adhesion. **If the stated maximum recoat time for the epoxy have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional barrier coats. Contact your local Carboline Marine Representative for assistance/guidance.**

CLEANUP & SAFETY

Cleanup	Use Thinner #2.
Safety	Read and follow all caution statements on this product data sheet and on the SDS for this product. Employ normal safety precautions. Use adequate ventilation. Keep container closed when not in use.

PACKAGING, HANDLING & STORAGE

Packaging	5 gallon pails only
Shelf Life	12 months at 75°F (24°C)
Storage Temperature & Humidity	40° -100°F (4°-38°C) 0-90% Relative Humidity
Storage	Store in a cool, dry well-ventilated area. Keep container closed and upright when not in use to prevent leakage.
Shipping Weight (Approximate)	**5 Gallon Pails** Red (0500)-77.9 lbs (35.33 kg) Black (0900)-76 lbs (34.47 kg) Blue (0100) 76.9 lbs (34.88 kg)
Flash Point (Setaflash)	80°F (26°C)

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