



## APPLICATION GUIDE FOR

## NAVY MARK V SPECIAL OPERATIONS CRAFT

### ***SEA-Speed V3™ DTM***

(Hard film fluorinated foul release direct-to-metal coating)

### **SCOPE**

This specification, together with the Product Data Sheet, defines the requirements for the Maintenance and the pre-treatment, abrasive blasting, application, and inspection of an exterior underwater hull surface with a **HULLGUARD™** / **SEA-Speed™ DTM** coating system.

### **STANDARDS**

#### Swedish and Steel Structures Painting Council (SSPC)

- SP-1 Solvent Cleaning
- SP-3 Power Tool Cleaning
- SA-2** or SP-6 Commercial Blast
- SA-3** or SP-5 White Metal
- SA-1** or SP-7 Brush Blast
- SA-2½** or SP-10 Near White Metal Blast Cleaning
- SP-11 Power Tool Cleaning to Bare Metal
- PA-1 Shop, Field and Maintenance Painting
- PA-2 Measurement of Dry Paint Thickness with Magnetic or Electronic Gauges
- PA-3 A Guide to Safety in Paint Application

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The ideal preparation is to remove all old paint and start with a clean smooth surface. As vessels age many coats of paint are applied over one another and cause hull roughness. This contributes to increased weight, loss of speed and increases the possibility of coating failure.

## **PREPARATION**

### Surface Preparation for all Immersed Surfaces

1. **STEEL:** Abrasive blast steel with an adequate abrasive in order to remove fouling and to create an anchor pattern in order to produce SA2½ (SP-10).
2. **ALUMINUM:** Abrasive blast with an adequate abrasive in order to produce an anchor profile of SA2½
3. **NON-METALLIC:** Roughen surface with No. 2 sandpaper to produce an anchor profile of 1.0- 1.5 mils. Remove all foulings off the surface. Be sure old coating is intact and adhering.

### Special Areas

All welded areas and appurtenances shall be given special attention for removal of welding flux in crevices. Weld splatter, slivers, and surface laminations exposed during surface preparation cleaning, shall be removed by grinding.

### Blast Surface Protection

1. **Steel:** All steel surfaces shall be coated during the same day they are blasted and coated prior to sundown of that day, before any rusting occurs.

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**2. Aluminum and Non-Metallic:** Aluminum and non-metallic surfaces do not have to be coated the same day; however, all surfaces not coated the same day must be washed to be free of salt, dirt, oil and grease.



**COATINGS:**

Coating System applied to clean blasted steel or aluminum:

- 1<sup>st</sup> Coat     **HULLGUARD™** or other approved primer /ac  
@ 200 or 8 mils (200 Microns) DFT. Apply at 10 mils (250 microns) wet film thickness.
  
- 2<sup>nd</sup> Coat     **SEA-Speed™ DTM** Polysiloxane Epoxy  
@ 200μ or 8 mils (200 microns) DFT. Apply at 9 mils (225 microns) wet film thickness

Mixing and Application of **HULLGUARD™** and **SEA-Speed™ DTM**

1. Mix all coating materials with a power mixer and apply in accordance with Seacoat Technology, LLC Product Data Sheet and application instructions.
  
2. Flush all spray equipment thoroughly between products to ensure no cross contamination. Use only MEK, Ameron T-10 or International 220 for flushing and cleaning of pumping equipment.
  
3. Spray apply first and second coat with airless equipment; for best results we recommend a 63:1 ratio airless or larger (Ideal is 74:1 Premier). Also, the material hose to be 1/2" O.D. and 3/8" I.D.
  
4. **HULLGUARD™** will be applied in two coats in order to facilitate coating:

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Upon completion of grit blasting to the specified profile and compressed air cleaning of the hull and acceptance by inspectors; Apply one coat of **HULLGUARD™** at 10 mils (250 microns) wet film thickness.



For best adhesion for the **SEA-Speed V3** as applied over the **HULLGUARD** should be allowed to cure to “TACK FREE” stage. (Able to barely leave a thumb print after applying firm pressure). Estimated recoat window for application of SEA-SPEED V3 over the **HULLGUARD™** is maximum 6 hours. Note that if recoat times are exceeded a tie coat of **HULLGUARD™** may be required at 3 mils (75 microns) DFT prior to applying SEA-SPEED V3.

### **TOPCOAT (SEA-Speed V3):**

Apply one coat of **SEA-Speed V3**@ 9 mils (225μ) minimum wet film thickness up to 10 mils (250 μ) wet film thickness.

Apply the SEA-SPEED 12” – 18” from the surface at right angles to the surface. Applicator shall cross hatch while applying to achieve the following wet film thicknesses. Special precautions shall be taken to prevent runs or sags.

Mix all coating materials in accordance with SeaCoat Technology, LLC Product Data Sheets and application instructions.

#### **HULLGUARD™:**

1. **HULLGUARD™** is supplied in a two component package (4parts resin/1 part cure). Add cure to resin and mix with an explosion proof mixer. Mix thoroughly. Thinner may be added up to 10 % by volume (189 milliliters/6.4 ounces per mixed kit) maximum.
2. No induction time prior to commencing application.
3. Tip size shall be 0.021 – 0.025 inch.

Flush all spray equipment thoroughly between products with Ameron T 10

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epoxy thinner to ensure no cross contamination.



### **SEA-SPEED V3:**

1. SEA-SPEED is provided in five gallon pails. It is supplied as 1:1 mixture by volume. Black pails contain 2.5 gallons of PART A (activator) color code USN Black: Grey pails contain 2.5 gallons of PART B (resin). Premix PART B and add to PART A. While adding PART B to PART A Mix thoroughly with a power mixer until color is fully homogeneous. No induction time is required.
2. Spray apply with airless equipment as prescribed. Spray tip shall be 0.019 – 0.023
3. Allow coating to dry thoroughly prior to shifting blocks; (Usually 24 hrs. If weather is cold allow longer up to 72 hours or o the point coating can not be damaged easily.
4. To coat block marks, make sure surface preparation is as prescribed. Lightly sand the new SEA-SPEED V3 approximately 2 inches around with eighty grit paper. Wipe the entire area with MEK.
5. Apply **HULLGUARD™** on bare metal area only. Do not overcoat SEA-SPEED. Apply using spray or a four inch wide foam roller, Tip with a natural bristle brush if necessary.
6. Allow **HULLGUARD™** to cure to thumb print stage.
7. Apply SEA-SPEED V3 with a sprayer or foam roller to obtain the required mil thickness. Apply SEA-SPEED V3 over the primer and feather onto the sanded area.

Draft marks and markings: white SEA-SPEED has been provided. Mix appropriate quantities on a 1:1 by volume ratio. Draft and other markings may be applied via brush.

***Do not thin material. Use Ameron T 10 solvent or other approved Epoxy thinner for cleaning only. DO NOT USE XYLENE.***

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## INSPECTION AND SAFETY

### Inspection

1. It is perceived that the vessel will be placed back into the water before the full cure of the **SEA-Speed™ DTM** occurs; hence, in order to insure that a proper dry film thickness is achieved, wet film thickness readings must be taken continuously during application.
2. All DFT measurements and their locations shall be in accordance with SSPC PA-2, paragraphs 1-5, and documented for record.
3. Substrate temperature must be above 50° F (10° C) and at a minimum must be 5° F (3° C) above the Dew Point.
4. Vessel may be placed into the water as soon as the coating system has achieved a hardness that is not easily mechanically damaged.
5. ***For each 10° F under 77° F (6.25° C under 25° C) add 6 hrs to re-float time.***

### Safety

Proper attire, such as air masks and goggles must be worn during application. Avoid ingesting coating through the nose or mouth. Refer to MSDS sheets for industrial safety and hygiene procedures. Safety precautions and procedures shall be in strict compliance with SSPC PA-3 paragraphs 1-16

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