



# SPECIFICATION DATA

## OVERLAY SPECIFICATION ON SHIP-DECKS

### I. SCOPE:

This specification covers information for materials and labor necessary for the preparation and finishing of pedestrian walking areas on steel, aluminum, fiberglass or wood Ship Decks. It also outlines installation procedures which comply with industry standards. This system should be installed by a TUFFLEX Polymers (TUFFLEX) Factory Qualified Applicator.

### II. MATERIALS:

All materials to be installed shall be manufactured by TUFFLEX and purchased from approved TUFFLEX distributors. The following is a list of items needed for the Ship Deck Overlay installation:

**Primer:** TUFF-POXY Primer #2 and several other TUFFLEX Primers are acceptable for this installation depending on substrate. Refer to the appropriate TUFFLEX Primer Technical Bulletin for further information.

**Joint Tape:** TUFF-TAPE "PW" at 4" to 6" width.

**Detail Membrane:** TUFFLEX Resin Binder Concentrate (RBC) "TUFF"

**Base Membrane:** TUFFLEX Resin Binder Concentrate (RBC) "TUFF"  
*\*Note: Refer to the Technical Bulletin on this material for further information.*

**Base Membrane Filler:** TUFFLEX "TUFF" Resin Binder Concentrate (RBC) may have fine rubber granules added in order to thicken the material for sloping, coving and retailing purposes. When 25% catalyzing water is added, it increases the volume by 25% and becomes Base Membrane Mixture (BMM). The addition of sand or rubber also further increases the product yield and economy. Refer to the TUFFLEX SPECIFICATIONS "CRACK FILLING AND CAULKING MATERIALS" and "SAND SLURRY SPECIFICATION AND APPLICATION GUIDE" for further information.

**Surface Texture:** Many surface texture options are available to broadcast into the TUFFLEX "TUFF" BMM after it has been applied. Refer to the TUFFLEX ADVISORY "SURFACE TEXTURES ON TUFFLEX MEMBRANES" for a full explanation of the many options available. The end user customer must make the final choice as determined by their need for traction enhancement safety concerns and surface wear & tear protection. If an extra heavy traction surface is needed, refer to the TUFFLEX ADVISORY "BACKROLLING - Why, When & How" for further information.

**Surface Topcoat:** Several TUFFLEX COLORCOAT Topcoats are available in order to provide a wear surface over the TUFFLEX Membrane and texturing granules. Also refer to the TUFFLEX Technical Bulletin of the Topcoat selected.

### III. PREPARATION:

All surfaces shall be completed, clean, and free from structural defects prior to coating application. All flashing details must be properly prepared and ready for membrane application. All surfaces to be coated should be structurally and securely anchored.

**Metal:** Steel must be prepared to a "Near White Metal", equivalent to SSPC #10 or NACE #2. A 3-mil blast profile is recommended. Prime the entire horizontal area and vertical turn ups to counter-flashings or terminations with marine grade zinc rich epoxy primer at the rate of 300-400 square feet per gallon (depending upon the surface porosity and solids content of the primer).

**Plywood:** Plywood should be knothole free. Plywood shall conform to U.S. Products Standards PS 1-66 and shall carry the grade trademark - American Plywood Association. Interior grades, including those with exterior glue, are not acceptable. All walking and roof decks shall be

APA Marine Grade Exterior A/C or better. Tongue and groove 3/4" is the preferred sheeting for optimum performance. Always vent soffit areas under decks from sides or underneath to relieve surface pressure.

Plywood sheeting must be fastened with screws at a maximum of 6" o.c. (glue is also suggested). A 1/8" space should be left between seam joints to allow for the plywood sheets to flex and move. If plywood is installed tight, saw cut a 1/8" wide groove. Prime all metal flashings with zinc rich epoxy primer.

### IV. INSTALLATION:

#### A. Primer Application:

**1. Primer:** Prime all prepared metal and plywood surfaces with TUFF-POXY Primer #2 applied at the rate of 300 - 400 square feet per gallon (depending on surface profile). Allow to dry prior to the application of the TUFFLEX "TUFF" BMM.

**2. Depressions and Irregularities:** Fill all irregularities with a TUFFLEX "TUFF" BMM mixture that has been thickened with industrial grade sand or fine rubber granules to a "stay put" consistency.

**3. Joints, Cracks and Transition:** TUFF-TAPE "PW" Polyester fabric tape should be set into the TUFFLEX "TUFF" BMM. The tape should be placed so it is free of air, blisters or wrinkles. Pull the tape and material tight to the deck for a smooth transition. Do not leave a "bump" that will show through the membrane when it is applied. Center tape over the subject gaps and transition areas.

#### B. Base Membrane Application:

**1.** Detail all flashings, transition edges and turn ups with a thickened TUFFLEX "TUFF" BMM mixture. Feather to a smooth transition. Do not leave a "bump" that will show through the membrane when it is applied.

**2.** Apply a uniform coating of TUFFLEX "TUFF" (BMM) over the deck surface at the minimum rate of 4 gallons of mixed TUFFLEX "TUFF" BMM per 100 square feet (64 mils) carrying this mixture over all detailed areas. (note: 3 1/4 gallons of TUFFLEX "TUFF" RBC plus 3 quarts, 25%, of water equals 4 gallons of BMM). Apply a sufficient amount of BMM over the detailed areas to hide all seams and defects for a uniform look. For further information on material calculations, refer to the TUFFLEX Worksheet in the "How To" Section.

**3.** After the application of the TUFFLEX BMM, let it stand until the membrane has slightly jelled. Then broadcast the rubber texture granules over the entire surface to refusal.

**4.** When the membrane will accept foot traffic, remove all excess texture with a broom and/or vacuum and save for reuse. Make any repairs necessary to imperfections or defects. Let repairs cure.

**C. Finish Topcoat:** Using a squeegee and/or a medium nap roller, uniformly coat the entire textured membrane surface with the TUFFLEX COLORCOAT Al-Ester Topcoat in the color chosen. Two applications of Topcoat are recommended with each coat applied at 100 square feet per gallon. Allow a 8 to 24 hour cure time between each coat. Take care to apply each coat uniformly in order to assure a streak free surface. Refer to the TUFFLEX ADVISORY "BACKROLLING - Why, When & How" for some hints on how to detail those areas identified as extra heavy wear areas prior to applying the COLORCOAT Finish Coat to the entire deck.

*Also refer to the TUFFLEX Technical Bulletin on the Topcoat being used.*

### V. PRECAUTIONS:

Before using these products read the container precautionary label and the Safety Data Sheet (SDS) carefully. Personnel applying urethane coatings and solvent based epoxy primers should wear protective clothing and gloves, avoid contact of material with skin or eyes and avoid breathing vapors. Mix and apply in well ventilated areas and observe normal safety precautions. Keep materials away from heat, sparks and flames. Do not

allow the use of spark producing equipment during application and until all vapors are gone. Store materials in a dry place at temperatures between 35°F-85°F. THIS PRODUCT IS FOR PROFESSIONAL USE ONLY.

#### **VI. GUARANTEE / WARRANTY:**

TUFFLEX Polymers (TUFFLEX) warrants its products to be free of defects in workmanship and materials only at the time of shipment from our factory. If any TUFFLEX materials prove to contain manufacturing defects that substantially affect their performance TUFFLEX will, at its option, replace the material or refund the purchase price.

When this Elastomeric Coating System is installed by a Factory Qualified Installer, is inspected and approved in accordance with these specifications, and after receipt of the final payment, the Factory Qualified Installer shall issue the installer's customary and standard installation guarantee covering defects in material and workmanship. The installation contractor has total control over substrate bonding and aesthetics.

The dollar value of TUFFLEX's liability and buyer's remedy under this limited warranty shall not exceed the purchase price of the TUFFLEX materials in question.

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