FOAM ARMOR™ 3150/2200/2205

SPECIFICATION GUIDELINE
ELASTOMERIC COATING SYSTEM FOR SOFT PLAY PARTS AND FEATURES

1.0 SCOPE

1.1 This Guideline for **FOAM ARMOR** covers the requirements for surface preparation and application of this these High-Performance Polyurethane Elastomeric Coatings over Specially Selected EVA Substrates. Use www.waterparktech.com for additional information throughout this Specification Guideline.

2.0 INTENT

2.1 The intent of this specification is to provide direction and guidance to help ensure the proper and complete installation of the **FOAM ARMOR** Elastomeric Polyurethane Coating System. Depending on the condition of your substrate, a thorough and complete preparation process is required to assure maximum bond and long-term performance.

2.2 The application contractor's proposal should be based upon these Specification Guidelines and the technical information provided in the manufacturer's Technical Data Sheets for the specified materials.

2.3 **FOAM ARMOR 3150/2200** is a high solids system creating a monolithic membrane to protect soft foam EVA for long term exposures in Chlorine Environments. This system may use **UrePrime 1305** primer as an adhesion promoter prior to certain substrates such as concrete prior to adhering the EVA foam. When adhering to New or existing concrete surfaces, it may be necessary to use an epoxy grout to fill cracks and irregularities. Contact Manufacturer for specific applications parameters.

3.0. MATERIALS

3.1 Surfacer/Filler

3.1.1 Epoxy 100% solids Crack and Filler , as approved by the manufacturer.

3.2 Primer

3.2.1 **UrePrime 1305**, is a penetrating primer over concrete to seal porosity. Mix ratio 1A:3B

3.3 EVA Foam

3.3.1 Creative Polymers uses a very specific EVA foam for proper adhesion to this substrate. Only specified foam may be used with this coating system. EVA foam is available in ½" to 2" thicknesses for the majority of applications. Consult Creative Polymers for Foam Specs.

3.4 EVA Adhesive

3.4.1 The Base Coating **Foam Armor 3150** can be used in some applications as the adhesive in new or replacement EVA Foam Applications. Consult Creative Polymers for specific adhesives when high stress forces are expected.

3.5 Basecoat

3.5.1 **FOAM ARMOR 3150**, a 100% high solids, chemical resistant Elastomeric Polyurethane Membrane. 1A: 1B mix ratio version. Apply a minimum of 2 coats at 50 mils each for a minimum of 100 mils. High use applications require 3 coats or a total of 150 mils and Commercial applications require minimum of 200 mils.

3.6 Topcoat Color Coat

3.6.1 **FOAM ARMOR 2200** two component Color Coat, Chlorine Resistant Polyurethane Hybrid Coating. Mix Ratio 1A to 2B. Apply 2 separate selected colors coats at 8 mils for a total of 16 mils. See literature and website for color chart or contact Creative Polymers.

3.7 Topcoat Clear Coat

3.7.1 **FOAM ARMOR 2205** two component Clear Coat, Chlorine Resistant Polyurethane Hybrid Coating. Mix Ratio 1A to 2B. Apply 3 separate clear coat applications at 8 mils each for a total of 24 mils for best performance.

4.0 SURFACE PREPARATION

4.1 Power Wash aged concrete surfaces using high pressure water blast of at least 3,500 psi to remove all oil, grease, dirt, or other contaminants using a heavy duty detergent such as Cal Clean in a ratio as required by the manufacturer. Keep blast head in close proximity to the surface for proper cleaning. Do a solubility test to confirm no contaminates remain.

4.2 Blasting Surface:

Concrete: New; Acid Etch or Blast Trac surface to remove laitance. Surfaces with existing coatings will need to be completely removed by Blast Trac or Sand Blasting to virgin concrete. Create a blast to roughen surface and create a sand paper texture.

4.3 Final Cleaning: Using high pressure air or water blast if needed, clean all remaining blasting/sanding residues and contaminates from the surface.

4.4 Repairs: Using Epoxy filler or equal, fill majority of deep cracks, scratches, gouges, honeycombs or defects by router or grinding.

4.5 Prepare to Paint: Assure that the surface is completely dry and free of any surface contaminants that have appeared, such as dust, leaves, droppings or other contaminants using compressed air free of all oil, water or other contaminants.

5.0 APPLICATION

A test area of the complete coating system should be applied to the substrate prior to starting the full application to determine if any additional special cleaning, primers or application procedures may be required.

5.1.1 All surfaces shall be dry and free of dust and debris prior to commencing with material application. Surface Temperature must be at minimum of 5°F (3°C) above the dew point to avoid moisture condensation and negative effects on the coatings system during and for 6 hours after the application at 75F. Warm and dry Temperatures must be maintained according to chart provided.

5.1.2 Multiple coat applications must fall within the window of intercoat adhesion. See data sheets for specific information. Use12-24 hours as a guide for most systems.

5.2 Filler / Patch

5.2.1 Store the unopened containers off the ground and in a dry protected area at 60-90°F (15-32°C).

5.2.2 Precondition components "A" and "B" to 70-90°F (21-32°C) prior to mixing.

5.2.3 Mixing: Use Manufacturers recommendations

5.2.4 Thinning: Not Recommended.

5.2.5 Pot Life: See Manufacturers Recommendations

5.2.6 Preferred Application Conditions:

	Normal	Minimum	Maximum
Material	75-90°F (24-32°C)	65°F (18°C)	100°F (38°C)
Surface	75-90°F (24-32°C)	55°F (10°C)	110°F (43°C)
Ambient	75-90°F (24-32°C)	55°F (7°C)	100°F (38°C)
Humidity	30-50%	0%	85%

5.1.8. Surface Temperature must be a minimum of 5°F (3°C) above the dew point.

5.1.9. Using a squeegee, trowel or putty knife, fill all gouges, spalls, cracks and other surface defects as needed. Do not fill greater than ¼" per application. See manufacturer's instructions.

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5.1.10. Dry / Recoat / Cure Times: See Manufacturer's instructions for cure details.

5.1.11. Maximum recoat time is 24-36 hours depending on temperatures.

5.3 Primer System UrePrime 1305

5.3.1 Store the unopened containers off the ground and in a dry protected area at 60-90°F (15-32°C).

5.3.2 Precondition components "A" and "B" to 70-90°F (21-32°C) prior to mixing.

5.3.3 Mixing: Power mix the "B" side component to a smooth, uniform consistency. Mix 1A to 3B.

5.3.4 Thinning: Not Recommended.

5.3.5 Clean up: Use MEK or Acetone solvent.

5.3.6 Pot Life:

Material Temperature:

60°F (15°C)	5-6.5 hours
78°F (25°C)	4-6 hours
90°F (32°C)	1.5 hours

5.3.7 Preferred Application Conditions:

	Normal	Minimum	Maximum
Material	75-90°F (24-32°C)	65°F (18°C)	100°F (38°C)
Surface	75-90°F (24-32°C)	55°F (7°C)	110°F (43°C)
Ambient	75-90°F (24-32°C)	55°F (7°C)	100°F (38°C)
Humidity	30-50%	0%	85%

5.3.8 Surface Temperature must be at minimum of 5°F (3°C) above the dew point.

5.3.9 Maximum recoat time is 24-36 hours depending on temperatures.

5.3.10 Application Equipment:

5.3.10.1 Roller:

5.3.10.1.1 Use of rollers require that a fiber free, 3/8” nap roller. Roller type is extremely important! Use a solvent and shed resistant commercial grade roller.

5.3.10.2 Airless Spray

5.3.10.2.1 Airless spray tip size 0.019 – 0.023 with 8” fan as a general guide.

5.3.11 Dry Film Thickness: UrePrime 1305 at 5-8 mils per coat. Many applications will be one coat of PolyPrime 1305 primer. However, multiple coats may be necessary depending on roughness of concrete. Minimum dry film thickness is 5 mils.

5.3.12 Temperature must be 55F or above during the cure process.

5.4 Base Coat FOAM ARMOR 3150 Elastomer

5.4.1 Store the unopened containers off the ground and in a dry protected area at 60-90°F (15-32°C).

5.4.2 Precondition components "A" and "B" to 70-90°F (21-32°C) prior to mixing.

5.4.3 Mixing: Power mix “B” component to a smooth, uniform consistency and then combine 1 "A" to 1 "B" by volume and mix thoroughly for 3 minutes.

5.4.4 Thinning: Not Recommended.

5.4.5 Clean up: Use MEK solvent.

5.4.6 Pot Life:

Material Temperature:

60°F (15°C) recommended	15-20 minutes not
78°F (25°C)	8-12 minutes
90°F (32°C)	Less than 6 minutes

5.4.7 Preferred Application Conditions:

	Normal	Minimum	Maximum
Material	75-90°F (24-32°C)	65°F (18°C)	100°F (38°C)
Surface	75-90°F (24-32°C)	45°F (7°C)	110°F (43°C)
Ambient	75-90°F (24-32°C)	45°F (7°C)	100°F (38°C)
Humidity	30-50%	0%	85%

5.4.8 Surface Temperature must be at minimum of 5°F (3°C) above the dew point. Ambient temperature must be steady or rising for 18 hours before moisture insensitive.

5.4.9 Application Equipment:

5.4.9.1 Roller:

5.4.9.2 Use of rollers require that a fiber free, 3/8” nap roller. Roller type is extremely important! Use a solvent and shed resistant commercial grade roller.

5.4.10 Dry Film Thickness: Apply **FOAM ARMOR 3150** at a uniform thickness of 50 mils by roller, squeegee or plural spray per coat. 100 to 200 mils required as previously mentioned.

5.4.11 Dry / Recoat / Cure Times: The times shown below are based on a 30-50% RH and proper ventilation through the application area.

	50-60°F (10-15°C)	70-80°F (21-27°C)	90-100°F (32-40°C)
Surface Dry	3-4 hours	2-3 hours	1 hour
Hard Film	20 hours	14 hours	4 hours
Recoat (minimum)	8 hours	3 hours	1-2 hours
Recoat (maximum)	24 hours	18 hours	12 hours
Full Cure	9 days	6 days	4 days

5.5 Topcoat FOAM ARMOR 2300/2205 Color/Clear

5.5.1 Store the unopened containers off the ground and in a dry protected area at 60-90°F (15-32°C).

5.5.2 Precondition components "A" and "B" to 70-90°F (21-32°C) prior to mixing.

5.5.3 Mixing: Power mix “B” component to a smooth, uniform consistency and then combine 1 "A" to 2 "B" by volume and mix thoroughly for 3 minutes.

5.5.4 Thinning: Not Recommended.

5.5.5 Clean up: Use MEK or Acetone solvent.

5.5.6 Pot Life:

Material Temperature:

60°F (15°C)	90-120 minutes
78°F (25°C)	45-90 minutes
90°F (32°C)	Less than 1/2 hour

5.5.7 Preferred Application Conditions:

	Normal	Minimum	Maximum
Material	75-90°F (24-32°C)	65°F (18°C)	100°F (38°C)
Surface	75-90°F (24-32°C)	45°F (7°C)	110°F (43°C)
Ambient	75-90°F (24-32°C)	45°F (7°C)	100°F (38°C)
Humidity	30-50%	0%	85%

5.5.8 Surface Temperature must be at minimum of 5°F (3°C) above the dew point.

5.5.9 Application Equipment:

5.5.9.1 Roller:

5.5.9.1.1 Use of rollers require that a fiber free, 3/8” nap roller. Roller type is extremely important! Use a solvent and shed resistant commercial grade roller, such as the Worster Pro Grade 3/8” which is recommended.

5.5.9.2 Airless Spray

5.5.9.2.1 Airless spray tip size 0.017 with 8” fan as a general guide.

5.5.10 Dry Film Thickness: Apply **Slide Armor 2200 Color Coat** at a minimum of 8 dry mils (125 microns) per coat and in two coats minimum.

5.5.11 Dry Film Thickness: Apply **Slide Armor 2200 Clear Coat** at a minimum of 8 dry mils (125 microns) per coat and in three coats minimum.

5.5.12 Dry / Recoat / Cure Times: The times shown below are based on a 30-50% RH and proper ventilation through the application area.

	50-60°F (10-15°C)	70-80°F (21-27°C)	90-100°F (32-40°C)
Surface Dry	3-4 hours	2-3 hours	1 hour
Hard Film	20 hours	14 hours	4 hours
Recoat (minimum)	8 hours	3 hours	1-2 hours
Recoat (maximum)	24 hours	18 hours	12 hours
Full Cure	9 days	6 days	4 days

6.0 INSPECTION AND QUALITY ASSURANCE

6.1 It will be the Application Contractor's responsibility to perform first line inspection of all aspects of the surface preparation and lining application work and to assure conformance with all pertinent specifications.

6.2 The Application Contractor shall provide a daily record of all application process information, including temperatures, relative humidity, dew point, procedures and inspection data.

6.3 All of the Application Contractor's work to be performed and material to be supplied under the contract shall at all time be subject to inspection by the Owner's engineer or inspector who shall be allowed complete access for examining said work. This person may reject work not complying with the specifications.

6.4 The Application Contractor shall be aware that after preparing the surface of a completed section of work, it will be made available for inspection and approved by the Owner's engineer or by the representatives of the Owner.

6.5 Dry Film Thickness Measurement when applicable: Prior to the application of successive coats, dry film thickness measurements will be taken in accordance with SSPC-PA 2.

6.5.1 The **FOAM ARMOR 3150** BASE SYSTEM shall have a dry film thickness of no less than 100 mils (250 microns) over any surface.

6.5.2 The **FOAM ARMOR 2200** TOPCOAT COLOR/CLEAR SYSTEM shall have a dry film thickness of 40 mils or greater applied in multiple coats.

7.0 SAFETY

7.1 Read the Material Technical Data Sheet, the Safety Data Sheet (MSDS) and container labels of the materials being used for detailed health and safety information.

7.2 FOAM ARMOR and its related components should only be used by trained, professional painters. All materials associated with FOAM ARMOR SYSTEMS are to be considered hazardous. Any coating containing isocyanates can cause irritation to respiratory system and hypersensitive reactions. Asthma sufferers, those with allergies or any history of respiratory complaints should not use the FOAM ARMOR SYSTEMS or related products. Do not sand, flame cut, braze or weld in the vicinity while applying these liquid systems, as these materials are flammable. Use of proper respiratory protection is mandatory.

7.3 The Application Contractor will establish the number of air exchanges per hour required to maintain a safe working atmosphere during all phases of work. The Application Contractor will include details of his safety program for working in tanks with his bid, complete with a list of equipment used to test organic vapor and/or oxygen levels in the vessles.

7.4 All applicators and their helpers will wear appropriate respiratory protection equipment. The type of reparatory protection will depend upon the nature of the application and material hazard, and shall eliminate dust, fumes, mists, organic vapors, acids and alkaline contaminates.

7.5 The Application Contractor must comply with all Federal, State and Local regulations pertaining to safety, environmental protection and other pertinent regulations.