

PRODUCT DESCRIPTION

CHEMICAL DESCRIPTION

Solventless Aromatic Polyurethane, Chemical Cure, ASTM Type V

PRODUCT USAGE

DuraShield 210-61 (DS210-61) is a 100% solids, two-component polyurethane coating that contains **no** volatile organic compounds (VOC), solvents or **extending fillers**. Formulated specifically as a potable water tank, pipe, valve and fitting lining product, DS210 is a hard, durable, chemical resistant coating that also provides great flexibility and impact resistance for ferrous and non-ferrous metals, concrete and other surfaces. By employing hydrophobic polyurethane resins, DS210-61 has a very low water absorption rate – lower even than most epoxies – and the best cathodic disbondment protection possible. The hydrophobic properties of DS210-61 also impart improved tolerance to moisture, both in the container and during application. This allows DS210-61 to cure to a hard, flexible, durable film with a very glossy, extremely well-adhered, impermeable finish. DS210-61 is designed specifically to provide very fast cure times, while at the same time demonstrating excellent adhesion. Application of DS210-61 is accomplished by spray (using a certified LifeLast spray system).



**Certified to
NSF/ANSI 61**

COLORS

Almond, gray or black.

PRODUCT CERTIFICATIONS

Meets AWWA C222.

Certified to NSF/ANSI Standard 61 by the NSF for lining potable water tanks, pipes, valves, and fittings.

- Pipe, Valves, Fittings >= 8"; thickness up to 210 mils
- Tanks >= 50 gallons; thickness up to 210 mils

PRODUCT ADVANTAGES

- Highly impermeable – provides *the best* cathodic disbondment protection; tolerant application properties; very good moisture resistance
- Excellent adhesion
- Customizable formulation – optimizes spray characteristics; use up to 15% less coating to meet specifications
- Good flexibility - expands and contracts with substrate; great impact resistance
- High build characteristics - application thicknesses from 20 mils to 210 mils in one application; completely encapsulates welds, rivets and edges
- No extending fillers – solid, unfilled film provides optimal properties – excellent long-term adhesion

TYPICAL APPLICATIONS

- Potable Water Pipe Linings
- Potable Water Tank Linings
- Lining for Potable Water Valves and Fittings

SURFACE PREPARATION

Preparation requirements vary with application. Refer to "Application Specification for Steel Pipe – DuraShield 210 & DuraShield 210-61 Polyurethane Coatings" or contact LifeLast technical representative for assistance.

COATING SYSTEMS

PRIMERS

Steel: Self-priming

Non-Ferrous Metals & Galvanized Steel: Self Priming or Primall-160

Concrete & Wood: Self-priming or LifeLast Primall-160 epoxy primer

TECHNICAL DATA

SOLIDS VOLUME	100 percent										
MIX RATIO BY VOLUME	2 : 1 (Resin : Activator)										
RECOMMENDED DRY FILM THICKNESS	20 mils up to 210 mils; Thickness varies with application. Please consult your designated technical representative for assistance.										
CURE TIME	<table border="1"> <thead> <tr> <th>Temperature</th> <th>Dry To Touch</th> <th>Recoat Time</th> <th>To Immersion</th> <th>To Normal Use</th> </tr> </thead> <tbody> <tr> <td>75°F</td> <td>6-8 min.</td> <td>< 2 hr.</td> <td>72 hrs.</td> <td>12 hrs.</td> </tr> </tbody> </table>	Temperature	Dry To Touch	Recoat Time	To Immersion	To Normal Use	75°F	6-8 min.	< 2 hr.	72 hrs.	12 hrs.
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75°F	6-8 min.	< 2 hr.	72 hrs.	12 hrs.							
COVERAGE	Theoretical: 80.2 ft ² /gallon @ 20 mils; Typical Application: ≈ 70 ft ² /gallon @ 20 mils										
TIME TO HOLIDAY TEST	Coating must be dry to the touch before holiday testing is performed.										
NET WEIGHT PER GALLON	Resin: 8.6 ± 0.20 lbs/gallon, Activator: 10.3 lbs/gallon; Mixed: 9.2 ± 0.20 lbs/gallon										
SHIPPING INSTRUCTIONS	Unheated trailer, no special requirements. Keep dry.										
STORAGE TEMPERATURE	Temperature - Resin: Min 40°F, Max 120°F; Activator 9000: Min 40°F, Max 120°F Containers must be kept sealed in a dry environment.										
SHELF LIFE	12 months at recommended storage temperatures in sealed, unopened containers.										
HEALTH AND SAFETY	Consult MSDS for handling and safety information.										

PHYSICAL PROPERTIES

Adhesion to Steel (ASTM D4541; A.2)	> 1500 psi
Adhesion to Steel (ASTM D6677)	Rating - 10
Tensile Strength (ASTM D412)	3030 psi
Elongation (ASTM D412)	10%
Flexibility (ASTM D522)	No cracking or delam – 1" Mandrel
Cathodic Disbondment (ASTM G95, mtd A)	0 mm
Water Absorption (ASTM D570)	0.464%
Impact Resistance (ASTM G14)	180 in-lbs
Hardness, Shore D (ASTM D2240)	74±3
Abrasion Resistance (ASTM D4060, CS17)	69.4 mg
Dielectric Strength (ASTM D149)	470 V/mil
Chemical Resistance (ASTM D543)	10% H ₂ SO ₄ < 1% 30% NaCl < 1% 30% NaOH < 2% #2 Diesel 2% weight, <2% length/width

APPLICATION

MIXING	Power mix contents of resin containers for a minimum of 30 minutes, making sure to remove all pigment from the bottom and sides of the container.
GEL TIME	approx. 45 seconds
SPRAY TEMPERATURE*	Resin: 110°F - 150°F; Activator 9000: 80°F - 150°F; * Exact temps depend upon spray equipment
SURFACE TEMPERATURE	Min. 40°F, Max 140°F; surface should be clean, dry and more than 5°F above dew point. Ambient air temperature must be no less than 5°F above dew point.
AMBIENT CONDITIONS	Min. 0°F, Max 120°F; Relative Humidity should be less than 95%
SPRAY EQUIPMENT	See "Application Specification for Steel Pipe – DuraShield 210 & DuraShield 210-61 Polyurethane Coatings" for recommended spray equipment and setup. Spray equipment must be approved by LifeLast, Inc.