



# DURASHIELD 210-61

## TECHNICAL DATA SHEET (VER.4)

### PRODUCT DESCRIPTION

#### CHEMICAL DESCRIPTION

Solventless Aromatic Polyurethane, Chemical Cure, ASTM Type V

#### PRODUCT USAGE



Certified to  
NSF/ANSI 61

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).

#### 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 250 mils
- Tanks >= 50 gallons; thickness up to 250 mils

#### PRODUCT ADVANTAGES

- Highly impermeable – provides *the best* cathodic disbondment protection; tolerant application properties; very good moisture resistance
- Excellent adhesion – proven 3000+ psi on steel; does not decrease over time
- 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 250 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 a LifeLast Application Specification Guide or contact LifeLast technical representative for assistance.

#### COATING SYSTEMS

##### PRIMERS

**Steel:** Self-priming or *LifeLast Primall-160* epoxy primer

**Non-Ferrous Metals & Galvanized Steel:** *LifeLast Primall-160* epoxy primer

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

**TECHNICAL DATA**

**SOLIDS VOLUME** 100 percent

**MIX RATIO BY VOLUME** 2A:1B; A - Resin, B - Activator

**RECOMMENDED DRY FILM THICKNESS** 20 mils up to 250 mils; Thickness varies with application. Please consult your designated technical representative for assistance.

CURE TIME	Temperature	Dry To Touch	Recoat Time	To Immersion	To Normal Use
	75°F	6-8 min.	< 2 hr.	72 hrs.	12 hrs.

**THEORETICAL COVERAGE** *Spray Application:* 70 sq. ft/gallon @ 20 mils  
*Hand Application:* 80 sq. ft/gallon @ 20 mils

**NET WEIGHT PER GALLON** *Resin:* 8.8 ± 0.20 lbs/gallon, *Activator:* 10.3 lbs/gallon; *Mixed:* 9.3 ± 0.20 lbs/gallon

**STORAGE** **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)	2950 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 <sub>2</sub> SO <sub>4</sub> < 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 - 160°F; *Activator 9000:* 80°F - 160°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.**

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