DURASHIELD 310-61 JOINT & REPAIR SYSTEM
TECHNICAL DATA SHEET (v.3)

PRODUCT DESCRIPTION

CHEMICAL DESCRIPTION

Solventless Elastomeric Aromatic Polyurethane, Chemical Cure, ASTM Type V

PRODUCT DESCRIPTION

Certified to NSF/ANSI 61

DuraShield 310-61 (DS310-61) is a 100% solids, two-component polyurethane coating that contains no volatile organic compounds (VOC), solvents or hydrocarbon extending fillers. The DS310-61 Joint & Repair System (JARS) is a user friendly polyurethane formulation that can be hand or spray applied to joints and for repairs. The long pot life of DS310-61 allows for hand application on larger surfaces and the short cure time decreases the waiting time between coats. The hydrophobic nature of DS310-61 makes it suitable for hand application without foam formation, even in humid environments. DS310-61 provides the low permeability and chemical resistance of an epoxy, with the durability, flexibility and fast cure times of polyurethanes. This blend of properties results in excellent application characteristics, while at the same time making it ideal for long-term immersion protection. While DS310-61 has fast cure times, the nature of its chemistry allows for long recoat windows relative to comparative 100% solid urethanes. This helps to mitigate layering and recoat adhesion problems. DS310-61 is also formulated to provide optimal build properties. Complete encapsulation of welds and joints can be done in one application by spray or by two 20-25 mil coats by hand. Application of DS310-61 by spray must be done using a certified LifeLast spray system.

COLORS

Standard color is almond. Gray and Black are also available.

PRODUCT CERTIFICATIONS

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

- Pipe, Valves, Fittings >= 2"; thickness up to 250 mils
- Tanks >= 50 gallons; thickness up to 250 mils

Meets AWWA Standard C222

PRODUCT ADVANTAGES

- Highly impermeable – eliminates rust or corrosion; provides long-term protection
- Great chemical resistance – withstands most concentrated acids and bases
- Abrasion and impact resistant – minimizes damage during handling, inspection
- High adhesion – over 2000 psi on whiteblasted steel
- Safe to work with and apply – no solvents or VOC's
- User friendly application properties – long pot life with a short cure time
- Good flexibility – expands and contracts with substrate
- High build characteristics – application thicknesses of 20-25 mils by hand and 20-250 mils by spray in one application; completely encapsulates welds, rivets and edges
- Quick, inexpensive maintenance – patch holes and damaged spots in minutes

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 your designated LifeLast technical rep for assistance.

COATING SYSTEMS

PRIMERS

Steel: Self-priming
Non-Ferrous Metals and Galvanized Steel: *LifeLast* Primall-EP epoxy primer
Concrete and Wood: *LifeLast* Primall-160 epoxy primer

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TECHNICAL DATA

SOLIDS VOLUME 100 percent

MIX RATIO BY VOLUME 3A:1B; A – DS310-61 JARS Resin; B – Activator 9000

RECOMMENDED DRY FILM THICKNESS 20-250 mils total; 20-30 mils per coat; thickness varies with application.

CURE TIME

Temperature	*Dry To Touch*	*Recoat Time*	*To Immersion*	*To Normal Use*
75°F	120-150 min.	< 24 hrs.	72 hrs.	24 hrs.

THEORETICAL COVERAGE ***Spray Application:*** 70 sq. ft/gallon @ 20 mils
Hand Application: 80 sq. ft/gallon @ 20 mils – One prepackaged kit will cover a 12" wide section of 60" diameter pipe.

NET WEIGHT PER GALLON ***DS310-61 JARS Resin***: 10.85 lbs/gallon, ***Activator 9000***: 10.3 lbs/gallon;
Mixed: 10.7 ± 0.20 lbs/gallon

STORAGE TEMPERATURE ***DS310-61 JARS Resin:*** Min 40°F, Max 120°F; ***Activator 9000:*** Min 40°F, Max 120°F

SHELF LIFE 12 months at recommended storage temperatures.

HEALTH AND SAFETY Materials are safe for handling. Consult Material Safety Data Sheet for descriptive handling and safety information.

PHYSICAL PROPERTIES

Adhesion to Steel, Abrasive Blasted (D4541)	2680 psi
Adhesion to Steel, Power Tooled (D4541)	2940 psi
Adhesion to Steel, Abrasive Blasted (D6677)	10
Adhesion to Steel, Power Tooled (D6677)	10
Tensile Strength (D412)	2776 psi
Elongation at Break (D412)	41%
Flexibility, 75 mils (D522)	No cracking or delam – ¾" Mandrel
Water Absorption (D570)	0.49%
Cathodic Disbondment (G95, method A)	0 mm
Impact Resistance (ASTM G14)	200 in-lbs
Dielectric Strength (ASTM D149)	527 V/mil
Hardness, Shore D (ASTM 2240),	68±3
Chemical Resistance (ASTM D543)	10% H_2SO_4 < 1% 30% NaCl < 1% 30% NaOH < 2%

APPLICATION

MIXING Mix resin container prior to use to remove pigments from container bottom.

POT LIFE 12 minutes

APPLICATION TEMPERATURE **Spray: DS310-61 JARS Resin**: 140°F ± 10°F; **Activator 9000**: 80°F ± 10°F
Hand: Min 50°F, Max 90°F for both components

SURFACE TEMPERATURE Minimum 40°F, Maximum 120°F; Surface should be clean, dry and within -10°F of the ambient temperature. Ambient air temperature must be no less than 5°F above dew point.

SPRAY EQUIPMENT Graco® "Hydra-Cat" with King air head or Gusmer H-20/35 set to spray at a fixed volumetric ratio of 3:1. Use Graco® R-A-C IV or V spray tips in sizes from 0.021" to 0.043". **Spray equipment must be approved by LifeLast, Inc. Applicator must be certified by LifeLast, Inc.**

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