



**LIFELAST**<sup>®</sup>  
*Innovation Through Formulation*

## DURAGARD<sup>®</sup> TSX

### TECHNICAL DATA SHEET

EFFECTIVE: 3/01/19

#### PRODUCT DESCRIPTION

##### CHEMICAL DESCRIPTION

Solventless Aromatic Polyurethane, Chemical Cure, ASTM Type V

##### USAGE

DuraGard TSX is a 100% solids, two-component polyurethane coating that contains no volatile organic compounds (VOC) or solvents. TSX is a high-performance urethane that incorporates the physical properties and toughness normally only found in cast urethanes. TSX was formulated for applications requiring high sliding abrasion resistance and incremental impact resistance. With a hardness of Shore D50, TSX has a good combination of hardness for slip and flexibility for abrasion and impact. The unique chemistry of TSX has excellent hydrolytic stability and hydrocarbon resistance. DuraGard TSX is designed specifically to provide very fast cure times, while at the same time demonstrating excellent adhesion. DuraGard TSX is applied by an approved LifeLast spray system.

##### COLORS

Standard color is yellow. Custom colors available on request.

##### TYPICAL APPLICATIONS

- **Trucking Industry**
- **Material Handling Equipment**
- **Slurry Pipelines and Tanks**

#### PRODUCT ADVANTAGES

##### EXCELLENT SLIDING ABRASION RESISTANCE

Provides excellent wear protection in abrasive environments

##### GREAT FLEXIBILITY

Expands, contracts and flexes with the substrate

##### EXCELLENT HYDROLYTIC STABILITY

Retains properties in moist environments

##### FAST CURE TIME

Quick return-to-service times

##### GOOD CORROSION RESISTANCE

No primer necessary for non-immersion applications

##### HIGH BUILD CHARACTERISTICS

Application thicknesses from 20 mils to 500 mils in one application; completely encapsulates welds, rivets and edges

#### COATING SYSTEMS

##### PRIMERS

- **Steel, Non-Ferrous Metals & Galvanized Steel, Concrete, & Wood:** Self-priming, Primall-AP, Primall-125 or Primall-160

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**SOLIDS VOLUME**

100 percent

**MIX RATIO BY VOLUME**

2 : 1 (TSX Polyol : Activator 2300)

**RECOMMENDED DRY FILM THICKNESS**

20 mils up to 500 mils; thickness varies with application. Consult a LifeLast technical representative for information.

**COVERAGE**

- Theoretical: 80.2 ft<sup>2</sup>/gallon @ 20 mils
- Spray: ≈ 70-75 ft<sup>2</sup>/gallon @ 20 mils

**NET WEIGHT PER GALLON (RED)**

- Polyol: 9.3 ± 0.2 lbs/gallon
- Activator: 10.1 ± 0.2 lbs/gallon
- Mixed: 9.6 ± 0.2 lbs/gallon

**CURE TIME @ 75°F (24°C)**

Tack Free	Recoat Time	To Immersion	To Normal Use
15 min.	< 6 hours	24 hours	12 hours

**SHELF LIFE**

12 months at recommended storage temperatures in sealed, unopened containers.

**STORAGE**

- Temperature
  - Polyol: Min 50°F (10°C), Max 120°F (49°C)
  - Activator 2300: Min 55°F (13°C), Max 120°F (49°C)
- Containers must be kept sealed in a dry environment.
- Contact LifeLast for continuous storage >90°F (32°C)

**SHIPPING INSTRUCTIONS**

Unheated trailer, no special requirements. Keep dry.

### APPLICATION

**SURFACE PREPARATION**

Preparation requirements vary with application. Refer to the *DuraGard TSX Application Specification Sheet* or contact a LifeLast technical representative for assistance.

**MIXING**

Preheat Polyol to at least 90°F or it will be a waxy solid. Power mix contents of polyol containers for a minimum of 30 minutes, making sure to remove all pigment from the bottom and sides of the container.

**GEL TIME**

≈ 2 minutes @ 75°F (24°C)

**SPRAY TEMPERATURE\***

Polyol: 120°F (49°C) - 150°F (66°C); Activator 2300: 80°F (27°C) - 150°F (66°C)

\*Exact temperatures depend on spray equipment setup

**SURFACE TEMPERATURE**

Min. 40°F (4°C), Max 140°F (60°C); surface should be clean, dry and more than 5°F above dew point.

**AMBIENT CONDITIONS**

Min. 0°F (-18°C), Max 120°F (49°C)

Relative humidity should be less than 85%. Ambient air temperature must be no less than 5°F above the dew point.

**SPRAY EQUIPMENT**

Refer to *DuraGard TSX Application Specification Sheet* for recommended spray equipment and setup. **Spray equipment must be approved by LifeLast.**

PHYSICAL PROPERTIES		
Test	Standard	Result
Adhesion to Steel	ASTM D4541; A.2	3500 psi
Adhesion to Steel	ASTM D6677	Rating - 10
Tensile Strength	ASTM D412	5500 psi
Elongation	ASTM D412	250%
Flexibility	ASTM D522	No cracking or delamination - 1" Mandrel
Hardness, Shore D	ASTM D2240	50±5
Abrasion Resistance	ASTM G65	0.019 cm <sup>3</sup> /1000 rev.
Salt Spray	ASTM B117	>2000 hours

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