



LIFELAST[®]
Innovation Through Formulation

DURASHIELD[™] 320

TECHNICAL DATA SHEET

EFFECTIVE: 6/24/2019

PRODUCT DESCRIPTION

CHEMICAL DESCRIPTION

Solventless Aromatic Polyurethane, Chemical Cure, ASTM Type V

USAGE

DuraShield 320 is a 100% solids, two-component polyurethane coating that contains no volatile organic compounds (VOC) or solvents. Formulated as a durable, flexible, chemical resistant coating, DuraShield 320 provides good corrosion, abrasion and impact resistance for ferrous and non-ferrous metals, concrete and other surfaces. DuraShield 320's permeability is lower than most other competitive 100% solid urethanes. DuraShield 320 was formulated to have similar cured properties as DuraShield 310, but it is lower in viscosity and has a longer pot life for easier hand application. DuraShield 320 is typically hand applied (ask a LifeLast technical representative for information on sprayable formulations).

COLORS

Standard colors are almond and gray. Call regarding other colors.

QUALIFICATIONS

- FDA approved for dry bulk applications
- Meets USDA requirement for incidental contact. Check with a LifeLast technical representative for certified colors.

TYPICAL APPLICATIONS

- **Food Processing Industry**
- **Poultry, Beef, & Pork Industries**
- **Secondary and Primary Containment**
- **Flooring Applications**
- **Tank Coatings and Linings**
- **Freezer Tunnel Floor Coating**

PRODUCT ADVANTAGES

HIGHLY FLEXIBLE

Withstands normal flexing, expanding and contracting without cracking

LONG POT LIFE

When compared to similar 100% solid urethanes

GOOD CHEMICAL RESISTANCE

Withstands most concentrated acids and bases

EXCELLENT ADHESION

HIGHLY IMPERMEABLE

Provides excellent corrosion protection

HIGH BUILD CHARACTERISTICS

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

QUICK, INEXPENSIVE MAINTENANCE

Patch holes and wear spots in minutes

COATING SYSTEMS

PRIMERS

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

TOPCOATS

- Approved aliphatic urethanes. Consult a LifeLast representative for details.

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TECHNICAL DATA

SOLIDS

100% by volume

MIX RATIO BY VOLUME

3 : 1 [DS320 (Polyol) : Activator 9000 (ISO)]

RECOMMENDED DRY FILM THICKNESS

20 mils up to inches; thickness varies with application. Please consult a technical representative for assistance.

COVERAGE

- Theoretical: 80.2 ft²/gallon @ 20 mils, no shrinkage
- Applied: ≈ 70-75 ft²/gallon @ 20 mils

NET WEIGHT PER GALLON

- Polyol: 10.9 ± 0.2 lbs/gallon
- ISO: 10.3 ± 0.2 lbs/gallon
- Mixed: 10.7 ± 0.2 lbs/gallon

TIME TO HOLIDAY TEST

Coating must be cured to handle before holiday testing

CURE TIME 70°F (21°C) - 75°F (24°C)*

| Temperature | Tack Free | Recoat Time | To Handling/Traffic |
|-------------|------------|-------------|---------------------|
| 75°F (24°C) | 30–300 min | <24 hours | 2–48 hours |

* Varies by application technique, thickness & temperature

SHELF LIFE

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

STORAGE

- Temperature
 - ◇ Polyol: Min 40°F (4°C), Max 120°F (49°C)
 - ◇ ISO: Min 40°F (4°C), Max 120°F (49°C)
- Containers must be kept sealed in a dry environment.
- Contact LifeLast for continuous storage above 90°F (32°C)

SHIPPING INSTRUCTIONS

Unheated trailer, no special requirements. Keep dry.

APPLICATION

PHYSICAL PROPERTIES

| Test | Standard | Result |
|------------------------------------|--|---|
| Adhesion to Steel with Primall-160 | ASTM D4541 | > 1500 psi |
| Tensile Strength | ASTM D412 | 1860 psi |
| Flexibility (70°F, 20°C) | ASTM D1737 | 50 mils: 180° over 0.125" Mandral |
| Elongation at Break | ASTM D412 | 80% |
| Moisture Vapor Transmission | ASTM F1249 | 35-40 mils: 0.024 grams/100 in ² |
| Hardness, Shore D | ASTM D2240 | 64±3 |
| Service Transmission | Dry – Continuous: -40°F (-40°C) to 180°F (82°C) Maximum Surge: 220°F (104°C) Immersion – Insulated (max): 120°F (49°C) Non-Insulated: ambient | |

SURFACE PREPARATION

Preparation requirements vary with application. Refer to the *DuraShield 320 Application Specification Sheet* or contact a LifeLast technical representative for assistance.

MIXING

Power mix contents of polyol containers, making sure to remove all pigment from the bottom of the container. Mixing of ISO is not required.

POT LIFE

45 minutes @ 70°F (21°C) depending upon application technique and temperature

SPRAY TEMPERATURE*

Polyol: 120°F (49°C)- 150°F (66°C); ISO: 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 (-15°C) 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 (-15°C) above the dew point.

SPRAY EQUIPMENT

Refer to *DuraShield 320 Application Specification Sheet* for recommended spray equipment and setup. **Spray applicators and equipment must be certified by LifeLast.**

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