

**LONSEAL**  
 LEAVE AN IMPRESSION

**1. Product Name**

Fire-Retardant Roof and Walking Deck

- Londeck
- Londeck Sierra

**2. Manufacturer**

Lonseal, Inc.  
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**3. Product Description**

**BASIC USE**

Completely waterproof and fully adhered, Lonseal fire-retardant roof and walking deck is ideal for applications where a durable, low maintenance, high-traction surface is desired, such as outdoor walking decks, balconies and roofing. With a lightly embossed surface, it withstands high volumes of pedestrian traffic and weather-wear.

Lonseal fire-retardant roof and walking deck is available in 2 models, Londeck and Londeck Sierra. Both are resistant to the effects of sunlight, rain, snow, ozone, temperature variations and abrasive wear. Their extreme-weather durability enables them to retain their properties even after years of exposure.

**COMPOSITION & MATERIALS**

Londeck and Londeck Sierra are calendared waterproof sheeting products composed of multiple layers of polyvinyl chloride (PVC) resin, plasticizers, fillers and inorganic pigments. The top wearlayer is formulated to withstand effects of seasonal weather, air pollution and abrasive wear. The middle layer is designed with maximum elongation properties for dimensional stability. The backing layer provides flooring strength and stability and enhances the bonding strength of the adhesive. Flax and rayon stabilizing cloth is laminated as a backing.



**TYPES**

Londeck, Londeck Sierra  
 Londeck and Londeck Sierra are slip resistant, fire-retardant roof and walking deck products with lightly embossed surfacing. Virtually identical in all but color and pattern, both models are lightweight, yet hold up well under heavy foot traffic, making them ideal for use outdoors as sound absorbing, waterproof coverings for walking decks, balconies and roofing.

**SIZES**

See Table 1. Roll lengths can be modified on a special order basis. Consult with Lonseal for ordering details.

**COLOR**

Londeck is available in 8 color variations:

- Tudor Brown
- Fairmont Green
- Kensington Brown
- Pacific Sand
- Philipsburg Blue
- Briarwood
- Shaker Beige
- Dartmouth Gray

Londeck Sierra is available in 6 color variations:

- Sierra Cliff Face
- Mount Tan
- Sierra Stone
- Fairmont Green
- Platinum
- Titanium

**BENEFITS**

- Extremely durable and weather resistant
- Designed to meet a variety of diverse application requirements
- Composed of multiple layers for weather resistance, dimensional stability and strength
- Heat weldable and chemical weldable
- Environmentally friendly; LEED® compliant

**ACCESSORIES**

- Lonseal No. 900 - Latex-reinforced Portland cement-based smoothing and patching compound
- Lonseal Adhesive No. 555a - A premium quality, white acrylic adhesive suitable for installing all Lonseal sheet vinyl products; for use over approved porous substrates. LEED

**TABLE 1 SIZES**

Physical characteristics	Londeck, Londeck Sierra
Nominal thickness	0.080" (2.03 mm)
Co-calendered wearlayer	0.032" (0.81 mm)
Roll size	72" x 60' (18.3 x 18.3 m)
Weight	0.7 psf, 245 lb/roll (33.5 N/m <sup>2</sup> , 111 kg/roll)

Note - Roll lengths can be modified on a special order basis.

- EQ 4.1 compliant
- Lonseal Adhesive No. 400 - A nitrile rubber-based, high strength adhesive formulated for spray, roller or brush application to bond Lonseal vinyl to any approved substrate
  - Lonseal Adhesive No. 300 Epoxy - A 2-component epoxy adhesive for high performance indoor-outdoor installation of Lonseal sheeting over porous and nonporous substrates
  - Lonseal Self-Adhering (S/A) Tape
  - Lonsealer Type C Seam Sealer
  - Welding thread
  - 2300® Construction Triopolymer Sealant, manufactured by Geocel Corporation

**LIMITATIONS**

Do not install Londeck or Londeck Sierra on tar paper, asphalt residues, magnesite substrates or in areas subjected to considerable mechanical abuse. Lonseal does not recommend installing directly to existing coverings of any kind. Always prepare the installation site to "like new" condition. When specifying for indoor applications, install in accordance with "Lonseal Technical Manual for Interior Flooring Products."

**4. Technical Data**

**APPLICABLE STANDARDS**

Americans with Disabilities Act (ADA)

**ASTM International**

- ASTM C67 Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
- ASTM C297 Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions
- ASTM D570 Standard Test Method for Water Absorption of Plastics
- ASTM D751 Standard Test Methods for Coated Fabrics
- ASTM D756 Practice for Determination of Weight and Shape Changes of Plastics Under Accelerated Service Conditions (Withdrawn 1998)
- ASTM D1242 Standard Test Methods for Resistance of Plastic Materials to Abrasion (Withdrawn 2004)
- ASTM D1499 Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics
- ASTM D2299 Recommended Practice for Determining Relative Stain Resistance of Plastics (Withdrawn 1992)
- ASTM E108 Standard Test Methods for Fire Tests of Roof Coverings
- ASTM E1155 Standard Test Method for Determining FF Floor Flatness and FL Floor Levelness Numbers
- ASTM F710 Standard Practice for Preparing

- Concrete Floors to Receive Resilient Flooring
- ASTM F1303 Standard Specification for Sheet Vinyl Floor Covering with Backing
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
- ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes

FM Global (FM) - FM 1-52 Wind Uplift Test.

ICC Evaluation Service (ICC-ES) - AC-39 Acceptance Criteria for Walking Decks

Leadership in Energy and Environmental Design (LEED) Green Building Rating System

- MR 4.1 - 4.2 Recycled Content
- EQ 4.1 Low-Emitting Materials: Adhesives and Sealants

**APPROVALS**

City of Los Angeles - Approved for use over plywood or concrete as a "Class B" roofing and walking deck surfacing material. Research report No. 23825-T, June 8, 1973.

ICC Evaluation Service (ICC-ES)

- ICBO Legacy PR #2829
- ICC-ES ESR 2091

U.S. Department of Housing and Urban

**TABLE 2 PHYSICAL PROPERTIES**

Type, grade, backing, ASTM F1303	I, I, Class A (LF475a), conforms
Acceptance Criteria for Walking Decks, AC-39:	
Weatherometer, ASTM D1499	No crazing, cracking, spalling or softening
Accelerated aging, ASTM D756	Test for bond strength (43 psi)
Fire-retardant roof covering, ASTM E108	Class A
Fire-retardant walking deck, ASTM E108	Class B
Tensile strength and elongation, ASTM D751	
Weathered	9%
Aged	20%
Bond strength, ASTM C297	
Control	30 psi
Aged	43 psi
Freeze-Thaw	22 psi
Abrasion, ASTM D1242	0.001" (0.03 mm)
Percolation, AC-39 Section 4.7	0.1" (2.54 mm)
Water absorption, ASTM D570	5%
Chemical resistance, ASTM D2299	No crazing, softening, delamination or spalling
Freeze-thaw, ASTM C67	1%
Low temperature flexibility, AC-39 Section 4.11	No crazing or cracking
Concentrated load, AC-39 Section 4.12	No damage
Wind uplift, FM 1-52	No cracking, spalling, tearing, delamination or failure of fasteners
Tensile strength after aging, ASTM D756	1043.9 psi (7197 kPa)
Bongation, ASTM D756	213%



Development (HUD) - Londeck approved for use on properties offered as security for insured mortgages within the jurisdiction of the area office. Refer to file 9.2 PSH.

**PHYSICAL PROPERTIES**  
See Table 2.

**FIRE PERFORMANCE**

In accordance with AC-39:

- Roof - Class A rating, ASTM E108
- Deck - Class B rating, ASTM E108

**ENVIRONMENTAL CONSIDERATIONS**

- Londeck and Londeck Sierra meet LEED® MR 4.1 and 4.2 requirements for 20% or more pre-consumer recycled content
- Lonseal Adhesive 555A meets LEED EQ 4.1 requirements for Low-Emitting Materials: Adhesives and Sealants

**5. Installation**

Optimal installation is over properly constructed and vented plywood surfaces or concrete.

**PREPARATORY WORK**

Deliver products in manufacturer's original, unopened, undamaged containers with identification labels intact. Store materials in a dry location and at temperatures between 65 - 85 degrees F (18 - 29 degrees C). Store unopened rolls on ends.

**Site Conditions**

Maintain substrate temperatures between 65 - 85 degrees F (18 - 29 degrees C) during installation, and for 48 hours before and after installation. Substrates must be solid, free of contaminants, clean, dry, properly acclimated and smoothed with approved latex reinforced Portland based compound. Ensure that all flashings and other metal fittings are in place.

**METHODS**

Prior to installation of Londeck over concrete, test for moisture vapor to ASTM F1869 or ASTM F2170. When testing to ASTM F1869, maximum slab moisture content should not exceed 5.0 lb (2.3 kg). When testing to ASTM F2170, maximum relative humidity content should not exceed 75%.

Test for alkalinity to ASTM F710. Maximum alkalinity should not exceed pH of 9.

Test that substrate is flat and level to ASTM E1155. Floor flatness (FF) is to be FF 18 minimum; floor levelness (FL) is to be FL 15 minimum.

Refer to Lonseal, Inc.'s "Technical Manual for Exterior Products" for complete preparation requirements and for instructions related

to different substrate preparation.

Maintain substrate temperatures between 65 - 85 degrees F (18 - 29 degrees C) during installation. Allow time for material to relax. Use correct adhesives and roll immediately. Use electric heat gun for finish welding all seams. A lapweld can also be completed.

Refer to Lonseal, Inc.'s "Technical Manual for Exterior Products" for complete preparation requirements and for instructions related to different substrate preparation.

**Adhesives and Seam Treatment**

Selection of adhesives and sealants depends on the seam method, which is either "overlap" or "flush" type. No. 555a Transitional Acrylic is specified for all porous, nonporous and vertical applications; No. 400 Contact is specified as a contact adhesive for coving; and No. 300 Epoxy is specified for exposed perimeters and transitions. Reinforced S/A tape should be used under "flush type" seams, and Lonsealer Type C will adhere Londeck to the S/A tape at the seam. Use 4 mm color-matched weld thread and Geocel 2300 for clear exterior caulk. For an overlap weld, use sieve nozzle to fuse sheets at overlap.

**PRECAUTIONS**

Substrates must conform to requirements and be prepared as detailed in the latest online version of "Lonseal Technical Manual for Exterior Products."

**BUILDING CODES**

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

**6. Availability & Cost**

**AVAILABILITY**

Lonseal products are available through a network of qualified dealers and agents. Contact Lonseal, Inc., or refer to [www.lonseal.com](http://www.lonseal.com) for information.

**COST**

Consult with Lonseal, Inc., dealers and agents for detailed pricing information.

**7. Warranty**

Lonseal offers a 15 year limited warranty for exterior products. Complete warranty terms and conditions are available from the manufacturer. For details, consult Lonseal, Inc.

**8. Maintenance**

After adhesive has cured, routinely sweep and

hose down with clean water. Occasionally scrub with diluted TSP (trisodium phosphate) and deck brush, then rinse with clean water. Use non-rubber walk-off matting to minimize the effects of tracked-on abrasive dirt and grit. Use adequate furniture rests to avoid unsightly dents and gouges. Repair damaged material in accordance with instructions in Lonseal, Inc.'s "Technical Manual for Exterior Products."

**9. Technical Services**

Technical assistance, including more detailed information, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Lonseal, Inc., at 800-830-7111 or [technical@lonseal.com](mailto:technical@lonseal.com).

**10. Filing Systems**

- MANU-SPEC®
- Additional product information is available from the manufacturer upon request.