Rhino Linings®

DURATITE™ LRA

# Data Sheet

**DESCRIPTION:** DuraTite LRA is a two-component, closed-celled, spray polyurethane foam, low rise adhesive system designed to adhere a wide variety of board stock products to most roofing substrates in low-sloped roofing applications. It can also be used to adhere insulation boards to one another. Once fully cured DuraTite LRA demonstrates excellent thermal and dimensional stability and high compressive strength. DuraTite LRA is easy to apply in a liquid bead that spreads to a few inches in width while rising ¾" – 1" above the substrate. Once applied DuraTite LRA remains liquid for a period of 4 – 8 minutes while a slow chemical curing process takes place allowing time for board stock to be placed and "walked" into place.

**TYPICAL USES:**

- Board stock adhesive for roofing
- Residential, commercial and industrial low-slope roofs

**FEATURES & BENEFITS:**

- Low odor,excellent for sensitive areas, such as schools, office buildings and hospitals
- Quick cure
- Compatible with many roof decks, substrates and cover boards

| CHEMICAL PROPERTIES: | Test | Isocyanate (A) | Resin (B) |
|---|---|---|---|
| Specific Gravity @70° F (21° C), (grams/cc) | | 1.23 | 1.18 |
| Volatile Organic Compounds (g/l) | ASTM D-2369 | <5 | <5 |
| Mix Ratio, Parts per Volume | | 1 | 1 |
| Cream Time @ 77°F (25°C) | | 4 – 5 seconds | |
| Rise Time @ 77°F (25°C) | | 16 – 18 seconds | |
| Cure Time @ 77°F (25°C) | | 4 – 8 minutes | |
| Theoretical Coverage – Insulation to Concrete<br>Insulation<br>Wood<br>Cement Wood Fiber | | 2.0 squares/gallon | |
| Insulation to Smooth BUR<br>Mod Bit<br>Lightweight Concrete | | 1.8 squares/gallon | |
| Insulation to Steel | | 1.5 squares/gallon | |
| Insulation to Gypsum | | 1.3 squares/gallon | |
| Shelf Life - Unopened Containers | | 12 months | 12 months |

*Coverage can vary widely depending on substrate temperature, type and condition, ambient temperature, elevation, humidity, equipment and other factors.

| PHYSICAL PROPERTIES: | Test | Result |
|---|---|---|
| Density (pcf) | ASTM D-1622 | 2.9 – 3.2 ± 0.2 |
| Tensile Strength (psi) | ASTM D-1623 | 35 – 40 |
| Compressive Strength (psi) | ASTM D-1621 | 40 – 45 |
| Closed-Cell Content (%) | ASTM D-6226 | >90 |

**PROCESSING CHARACTERISTICS:** The system settings required to achieve quality spray foam application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum foam quality. DuraTite LRA does not require agitation, pre-heating or recirculation.

*(continued):*

| Equipment | Process Pressure | Spray Gun |
|---|---|---|
| Standard Proportioner / RhinoPro™ Cartridge Gun | 25 – 150 psi | Pour Tip |

**Process Temperatures**

| Iso (A) & Resin (B) Components | Ambient Temperature | Substrate Temperature |
|---|---|---|
| 60 – 80° F (15.6 – 26.7° C) | 40 – 110° F (4.4 – 37.8° C) | >40 |

**SURFACE PREPARATION:** Phenolic insulation must be removed prior to application. All surfaces must be dry and free of any debris, dirt, oil or grease before applying DuraTite LRA.

STEEL: On new steel, the shop coating/mill oil must be removed. The bonding surface must be free of any cleaner before applying DuraTite LRA.

EXISTING SMOOTH ASPHALTIC SURFACES: The surface must be dry and free of debris, dirt, grease and oil.

EXISTING POLYURETHANE FOAM: The surface of the polyurethane roof, including the coating, should be removed with a scarifier (minimum 1⁄2 inch).

METAL: DuraTite LRA has excellent adhesion to clean metal. Prime all non-ferrous metals (aluminum, copper, stainless, etc.) to further increase adhesion. Accepted primers include epoxy, chlorinated rubber, and wash primer.

**APPLICATION INSTRUCTIONS:** DuraTite LRA does not require agitation, pre-heating or recirculation. On existing or retrofit projects it is contractor's responsibility to ensure that existing substrate is adequately attached to the building to ensure proper wind uplift and general adhesion requirements. All areas of an existing roof that contain entrapped moisture must be repaired prior to application of DuraTite LRA in accordance with roofing manufacturer's specifications and/or roofing best practices. The building owner or general contractor shall provide a proper substrate. The structure shall be sufficient to withstand normal construction load and live loads. Defects in the deck must be documented and reported to the specifier, general contractor, roof cover manufacturer and Rhino Linings Corporation. Do not apply DuraTite LRA unless the defects are corrected. The roofing contractor must ensure that the existing roof is adequately attached to the building and meets all the requirements for an acceptable surface. Acceptable decks are structural concrete, gypsum, cementitious wood fiber plank, lightweight insulating concrete, minimum 22-gauge steel, minimum 5⁄8- inch plywood.

Multiple layers of insulation boards should use the staggered joint method of application.

**NOT RECOMMENDED FOR:**

- DuraTite LRA should not be used with isocyanurate board stock larger 4 ft x 4 ft.
- DuraTite LRA should not be applied to wet surfaces, or surfaces that contain loose debris, dirt, grease, or on any roof substrate that shows signs of excessive deterioration or loss of structural integrity as doing so may prevent proper adhesion.
- DuraTite LRA should not be applied during wet weather.

**SUBSTRATES:** DuraTite LRA is chemically and physically compatible with all common building materials including electrical wiring, wood, metal, concrete, plastic (PVC), copper, vinyl, glass, and roofing substrates & recovery boards including:

- Structural concrete
- Cementitious wood fiber plank
- Steel (22 gauge or thicker with approved cross section)
- Smooth surface BUR
- Existing sprayed in place polyurethane foam
- Most vapor barriers (including asphaltic and fleece-top)
- Expanded Polystyrene
- High Density Wood Fiber
- Perlite
- Certain Extruded Polystyrene
- Gypsum
- Lightweight insulating concrete
- Plywood (5/8-inch thick min.)
- Smooth and granular surface modified bitumen
- Base sheets
- Roof Insulation and Cover Board
- Polyisocyanurate
- DensDeck®
- Securock®

**HOW SUPPLIED:** Shipping weight per drum set is 1000 pounds (453.6 kg) or 1500ml cartridge. A set of DuraTite LRA consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

Drum, DuraTite LRA Part A #: FFPF-ISO A, DuraTite LRA Part B #: FFPF-LOW RISE ADHESIVE FOAM

RhinoPak, DuraTite LRA Part #: 10315-CS

**STORAGE:** Storage temperature is 55 – 85°F (12.8 – 29.4°C). Do not allow material to freeze.

*(continued):*

**SAFETY PRECAUTIONS: Health Considerations - Consult the Rhino Linings® Safety Data Sheets (SDS)**

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

**For Your Protection:** The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.

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