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PRODUCT CONTROL DIVISION
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PRODUCT CONTROL NOTICE OF ACCEPTANCE

Duro-Last Roofing, Inc.
525 Moreley Drive
Saginaw ,MI 48601

Your application for Notice of Acceptance (NOA) of:

Duro-Last Roofing System for Steel Deck Applications

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0122.03
EXPIRES: 08/26/2002

Raul Rodriguez
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 04/12/2001

ROOFING SYSTEM APPROVAL

| | | |
|--------------------------------|---------------------------------------|--|
| <u>Category:</u> | Roofing | Approval Date: <u>April 12, 2001</u> |
| <u>Sub-Category:</u> | Single Ply | |
| <u>Materials</u> | PVC | Expiration Date: <u>August 26, 2002</u> |
| <u>Deck Type:</u> | Steel | |
| <u>Maximum Design Pressure</u> | -105 psf (See Specific System Herein) | |
| <u>Fire Classification:</u> | See General Limitation #1 | |

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|------------------------------------|--|---------------------------|--|
| Duro-Last Accessories | Various | ASTM D-4434 | Custom fabricated accessories for parapets and penetrations in the Duro-Last roof. |
| Duro-Last Duro-Coated Fasteners | #14 x 1 1/2" up to #14 x 24" | PA 114 | Roofing and insulation fasteners, Duro-Coated with #3 Phillips head. |
| Duro-Last Insulation Plates | 3" diameter | PA 114 | Round plastic stress plates. |
| Duro-Last Fascia Bar | 1 3/4" x 10'; 4" x 10' | | Extruded vinyl drip edge with holes punched 8" o.c.. |
| Duro-Last Steel Plates | 3" x 3" | PA 114 | Galvalume steel stress plates. |
| Duro-Last Fascia Bar Cover | 1 3/4" x 10'; 4" x 10' | | Extruded decorative cover for Duro-Last Fascia Bar: white, tan or gray. |
| Duro-Last Termination Bar | 1 3/4" x 10' | | Termination bar with holes punched 6" o.c. |
| Duro-Last Membrane | .045" thick, fabricated in sheets up to 2000 sq. ft. | ASTM D-4434 | PVC polymer blend polyester reinforced roofing membrane: white, tan or gray. |
| Duro-Last Stainless Steel Screws | #12 x 1 1/4" | PA 114 | Termination and trim fasteners. |
| Duro-Last Vinyl Coated Sheet Steel | 4' x 10' x .043" thick | G-90 | G-90 galvanized steel, laminated with Duro-Last Vinyl Film. |
| Duro-Last Drip edge | 2" face x 10'; 4" face x 10' | | Extruded vinyl drip edge with holes punched 8" o.c.. |



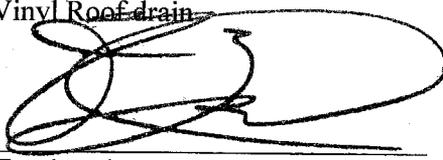
Frank Zuloaga, RRC
Roofing Product Control Examiner

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|---------------------------------------|--|---------------------------|--|
| Duro-Last Polyplates | 2" diameter | PA 114 | Round plastic stress plates. |
| Duro-Last Duro-Coated Hex Head Screws | #14 x 1 1/4" | PA 114 | Termination screws. |
| Duro-Last Two-Way Roof Vents | | | Injection molded two-way roof vents with a Duro-Last membrane skirt. |
| Duro-Last Membrane | .037" thick, fabricated in sheets up to 2500 sq. ft. | ASTM D-4434 | PVC polymer blend polyester reinforced roofing membrane: white, tan or gray. |
| Duro-Fold Membrane Underlayment Board | 4' x 50' x 3/8" thick | UL-790 | Extruded polystyrene with polypropylene facer |
| Duro-Last Gravel stop | 2" face x 10'; 4" face x 10' | | Extruded vinyl gravel stop with holes punched 8" o.c.. |
| Duro-Caulk 118 | 10 oz tubes | TT-S-00230C | Type II Class A |
| Roof-Trak Walk Pads | 30" x 60" x .125" thick | | Extruded vinyl walk way pads manufactured from Duro-Last membrane. |

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|-----------------|--------------------|---------------------------|---|
| AC Foam I & II | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| AC Foam Supreme | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Atlas FR-10 | 4' x 250' x 20 mil | UL-790 | Calcium carbonate impregnated fiberglass mat |
| Atlas FR-50 | 4' x 105' x 50 mil | UL-790 | Calcium carbonate impregnated fiberglass mat |
| CLS 315 | 10 oz. Tubes | | One part self leveling silicone |
| Concrete Nails | 2" to 8" | FM-4470 | Fluted concrete nails with flouorocarbon coating |
| Concrete Screws | 2" to 14" | FM-4470 | Fluted concrete screws with flouorocarbon coating |

| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|--------------------------------------|---------------------------------|----------------------------|---|
| Dens Deck Overlayment Board | Min. 2' x 4' | ASTM E-108 | Gypsum roof overlayment board |
| E'NRG'Y PSI-25 | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| E'NRG'Y II | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| ES Foam I | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Expanded Polystyrene | Min. 2' x 8' ; 1.5 # Density | ASTM E-108 | Polystyrene roof board insulation |
| Extruded Polystyrene | Min. 2' x 8' ; 1.5 # Density | ASTM C-557 | Polystyrene roof board insulation |
| Fiberglas Roof Insulation | Min. 3' x 4' | ASTM E-108 ; ASTM C-726 | Glass fiber insulation board |
| Foamfold Membrane Underlayment Board | 4' x 48' x ½" thick | UL-790 | Expanded polystyrene |
| High Density Wood Fiberboard | Min. 2' x 4' | ASTM C-208 | Fiberboard roof insulation board |
| Hy-Tech | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| IOS 95+GW | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| ISO-Shield R-Plus | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| ISO-Shield | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| ISO-Therm | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Multi-Max | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| NTB | 2-1/2" to 12" | | Plastic auger type fastener with anti-backout wires |
| Paroc Capboard | Min. 4' x 4' | ASTM E-108 ; ASTM C-726 | Rockwool mat insulation |
| Perlite Insulation | Min. 2' x 4' | ASTM C-728 | Perlite roof board |
| Pyrox | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Roof Drains | 3" & 4" | FST | Vinyl Roof drain |



| <u>Product</u> | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u> |
|--|-------------------|---------------------------|-----------------------------------|
| Star-AP | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| ThermaRoof | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Type X with water resistant core and facer Gypsum Board | Min. 2' x 4' | ASTM C-208 | Gypsum board |
| UltraGard Gold | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| UltraGard Premier | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |
| Vulkem 626 Caulk | 10 oz tubes | TT-S-00230C | Type II Class A |
| White Line | Min. 4' x 4' | PA 110 | Polyisocyanurate insulation board |

EVIDENCE SUBMITTED:

| <u>Test Agency/Identifier</u> | <u>Name</u> | <u>Report</u> | <u>Date</u> |
|--|---------------------|----------------------------------|------------------------|
| Factory Mutual Research Corporation | J.I. 3Y5A6.AM | Class 1-150 Windstorm | 3-10-95 |
| | Letter | Wind Uplift on Concrete Decks | 1-18-94 |
| | J.I. 1X8A8 .AM | Wind Uplift | 11-1-93 |
| | J.I. 1X2A7 .AM | Fire Resistance | 9-17-93 |
| | 4D6A4.AM 3005604 | Class 4470 | 08-90-99 03-13-2000 |
| | 3008342 | Class 4470 | 10-19-2000 |
| National Evaluation Service, Inc. | Ner-227 & Letter | Membrane Roofing | 2-01-94 |
| Underwriter Laboratories | R-10128(N) | Fire Resistance | 12-3-93 |



APPROVED ASSEMBLIES:

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type C(1): All layer of insulation are mechanically attached to roof deck.

Note: All General Limitations shall apply to this system.

| <u>Insulation Base Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|----------------------|--|----------------------------|-------------------------|
| Approved Type(s): Gypsum | | | | |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 6 | 1: 5.33 ft² |
| Approved Type(s): High Density Wood Fiber | | | | |
| Minimum: ½" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft² |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft² |
| Approved Type(s): Perlite | | | | |
| Minimum: ½" x 2' x 4' | Duro-Last #14 | [1] | 2 | 1:4 ft² |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft² |
| Approved Type(s): Paroc Capboard | | | | |
| Minimum: ¾" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft² |
| Minimum: ¾" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft² |
| Approved Type(s): AC FOAM I, AC FOAM II, AC FOAM SUPREME, Pyrox, E'NRG'Y II, PSI-25, UltraGard Gold, UltraGard Premier, Firestone ISO-95 GW, ES Foam I, Hunter Panels, or any approved Polyisocyanurate having a current NOA | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft² |

| <u>Insulation Top Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|----------------------|--|----------------------------|-------------------------|
| Approved Type(s): Extruded or Expanded Polystyrene | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft² |

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



- Vapor Retarders: (Optional) Any UL or FMRC approved vapor barrier.
- Barrier Sheet: (Optional) Atlas Energy Products FR-10®, FR-50®, ¼" Dens Deck, ½" thick UL Classification type X gypsum with a moisture resistant facer and core, Foamfold, or a second sheet of barrier board may be used over the insulation (see General Limitation #1).
- Membrane with 60" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 60" with Duro-Last fasteners and Poly-Plates® spaced 12" o.c. maximum, through the insulation and into the deck.
- Membrane with 28" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 28" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced 18" o.c. maximum, through the insulation and into the deck .
- Maximum Design Pressure: -45 psf (See Limitation #7)
- Maximum Fire Classification: See General Limitation #1.
- Maximum Slope: See General Limitation #1.



Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18 to 22 gage steel deck

System Type C(2): All layer of insulation are mechanically attached to roof deck.

Note: All General Limitations shall apply to this system.

| <u>Insulation Base Layer (Optional)</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Gypsum | | | | |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 6 | 1: 5.33 ft ² |
| Approved Type(s): High Density Wood Fiber | | | | |
| Minimum: 1/2" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Perlite | | | | |
| Minimum: 1/2" x 2' x 4' | Duro-Last #14 | [1] | 2 | 1:4 ft ² |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Paroc Capboard | | | | |
| Minimum: 3/4" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 3/4" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): AC FOAM I, AC FOAM II, AC FOAM SUPREME, Pyrox, E'NRG'Y II, PSI-25, UltraGard Gold, UltraGard Premier, Firestone ISO-95 GW, ES Foam I, Hunter Panels, or any approved Polyisocyanurate having a current NOA | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

| <u>Insulation Top Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Extruded or Expanded Polystyrene | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



Note: This system is approved to a maximum design pressure of -52.5 psf. No substitution shall be made:

- Steel Deck: 18 to 22 gage Approved ASTM designation A611 Grade E or ASTM designation A446 Grade E steel deck. Attached with ITW Buildex Traxx/5 fastener at a maximum spacing of 6" o.c. to minimum 0.25" thick steel supports having a maximum span of 6 ft. o.c. with deck side laps fastened at a maximum spacing of 24" o.c. with ITW Buildex Traxx/1.
- Vapor Retarders: (Optional) Any UL or FMRC approved vapor barrier.
- Barrier Sheet: (Optional) Atlas Energy Products FR-10®, FR-50®, ¼" Dens Deck, ½" thick UL Classification type X gypsum with a moisture resistant facer and core, Foamfold, Duro-Fold or a second sheet of barrier board may be used over the insulation (see General Limitation #1).
- Membrane with 28" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 28" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced at 18" o.c. maximum, through the insulation and into the deck.
- Membrane with 60" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 60" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced at 6" o.c. maximum, through the insulation and into the deck .
- Membrane with 120" tabs: Duro-Last® membrane shall be mechanically attached at its minimum 3" tabs, spaced every 120" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced at 6" o.c. maximum, through the insulation and into the deck .
- Maximum Design Pressure: -52.5 psf (See Limitation #7)
- Maximum Fire Classification: See General Limitation #1.
- Maximum Slope: See General Limitation #1.



Frank Zuloaga, RRC
Roofing Product Control Examiner

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18 to 22 gage steel deck

System Type C(3): All layer of insulation are mechanically attached to roof deck.

Note: All General Limitations shall apply to this system.

| <u>Insulation Base Layer (Optional)</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Gypsum | | | | |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 6 | 1: 5.33 ft ² |
| Approved Type(s): High Density Wood Fiber | | | | |
| Minimum: 1/2" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Perlite | | | | |
| Minimum: 1/2" x 2' x 4' | Duro-Last #14 | [1] | 2 | 1:4 ft ² |
| Minimum: 1/2" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Paroc Capboard | | | | |
| Minimum: 3/4" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 3/4" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): AC FOAM I, AC FOAM II, AC FOAM SUPREME, Pyrox, E'NRG'Y II, PSI-25, UltraGard Gold, UltraGard Premier, Firestone ISO-95 GW, ES Foam I, Hunter Panels, or any approved Polyisocyanurate having a current NOA | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

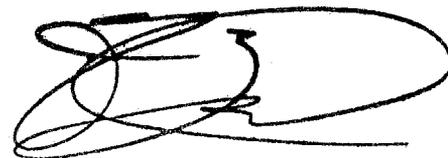
| <u>Insulation Top Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Extruded or Expanded Polystyrene | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



Note: This system is approved to a maximum design pressure of -75 psf. No substitution shall be made:

- Steel Deck: 18 to 22 gage Wheeling Corrugating Company BW series steel roof deck meeting ASTM designation A611 Grade E or ASTM designation A446 Grade E. Attached with ITW Buildex Traxx/4 or Traxx/5 fastener at a maximum spacing of 6" o.c., to minimum 0.25" thick steel supports having a maximum span of 6 ft. o.c. With deck side laps fastened at a maximum spacing of 30" o.c. with ITW Buildex Traxx/1.
- Vapor Retarders: (Optional) Any UL or FMRC approved vapor barrier.
- Barrier Sheet: (Optional) Atlas Energy Products FR-10®, FR-50®, ¼" Dens Deck, ½" thick UL Classification type X gypsum with a moisture resistant facer and core, Foamfold, or a second sheet of barrier board may be used over the insulation (see General Limitation #1).
- Membrane with 28" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 28" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced at 12" o.c. maximum, through the insulation and into the deck .
- Maximum Design Pressure: -75 psf (See Limitation #7)
- Maximum Fire Classification: See General Limitation #1.
- Maximum Slope: See General Limitation #1.



Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18 to 22 gage steel deck

System Type C(4): All layer of insulation are mechanically attached to roof deck.

Note: All General Limitations shall apply to this system.

| <u>Insulation Base Layer (Optional)</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Gypsum | | | | |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 6 | 1: 5.33 ft ² |
| Approved Type(s): High Density Wood Fiber | | | | |
| Minimum: ½" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Perlite | | | | |
| Minimum: ½" x 2' x 4' | Duro-Last #14 | [1] | 2 | 1:4 ft ² |
| Minimum: ½" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): Paroc Capboard | | | | |
| Minimum: ¾" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: ¾" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |
| Approved Type(s): AC FOAM I, AC FOAM II, AC FOAM SUPREME, Pyrox, E'NRG'Y II, PSI-25, UltraGard Gold, UltraGard Premier, Firestone ISO-95 GW, ES Foam I, Hunter Panels, or any approved Polyisocyanurate having a current NOA | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

| <u>Insulation Top Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u> (See RAS 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|--------------------------|--|--------------------------------|-----------------------------|
| Approved Type(s): Extruded or Expanded Polystyrene | | | | |
| Minimum: 1" x 4' x 4' | Duro-Last #14 | [3] | 4 | 1:4 ft ² |
| Minimum: 1" x 4' x 8' | Duro-Last #14 | [*] | 5 | 1:6.4 ft ² |

Note: Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

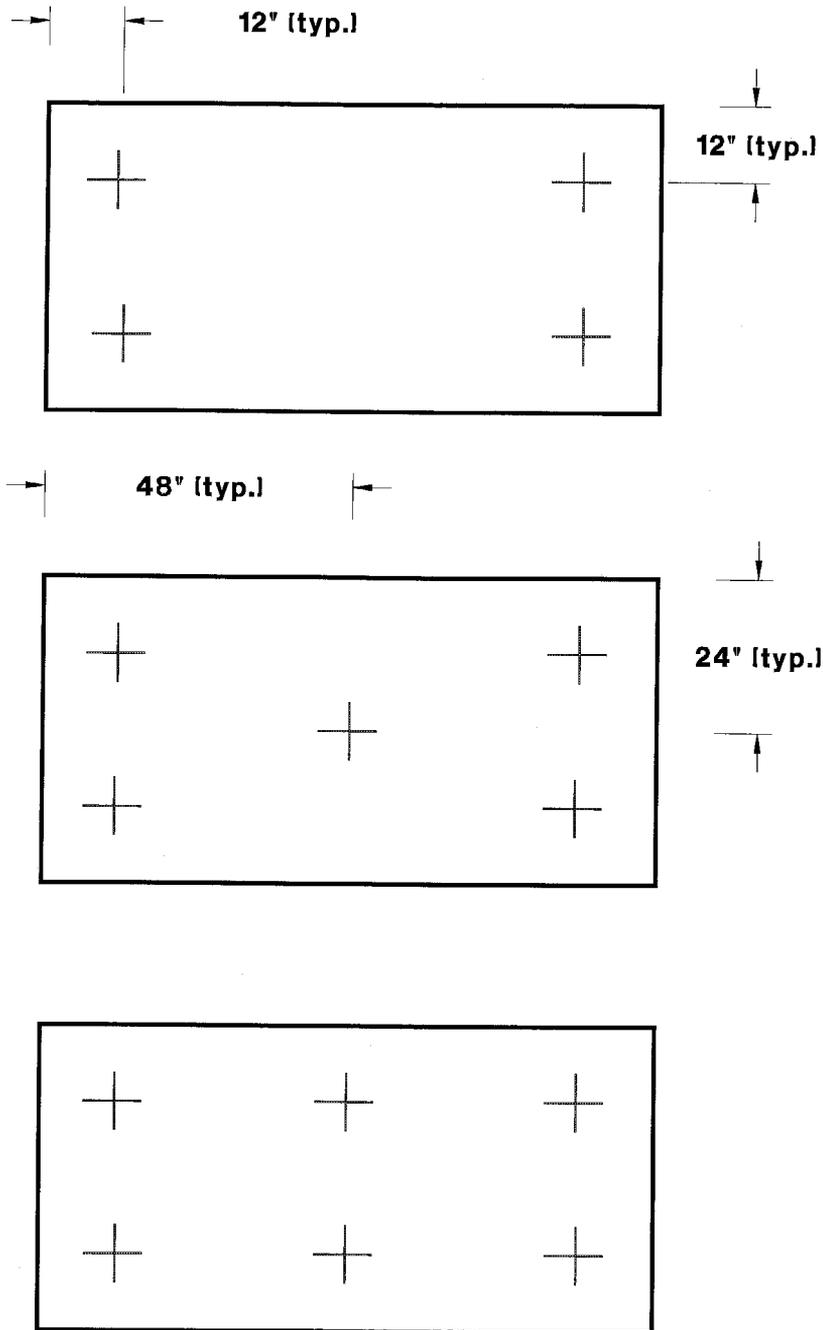


Note: This system is approved to a maximum design pressure of -105 psf. No substitution shall be made:

- Steel Deck: 18 to 22 gage approved steel roof deck meeting ASTM designation A611 Grade E or ASTM designation A446 Grade E. Attached with ITW Buildex Traxx/4 or Traxx/5 fastener at a maximum spacing of 6" o.c., to minimum 0.25" thick steel supports having a maximum span of 6 ft. o.c. With deck side laps fastened at a maximum spacing of 24" o.c. with ITW Buildex Traxx/1.
- Vapor Retarders: (Optional) Any UL or FMRC approved vapor barrier.
- Barrier Sheet: (Optional) Atlas Energy Products FR-10®, FR-50®, ¼" Dens Deck, ½" thick UL Classification type X gypsum with a moisture resistant facer and core, Foamfold, or a second sheet of barrier board may be used over the insulation (see General Limitation #1).
- Membrane with 28" tabs: Duro-Last® membrane shall be mechanically attached at its 3" tabs, spaced every 28" with Duro-Last fasteners with Duro-Last 2 in. Poly-Plates® spaced at 6" o.c. maximum, through the insulation and into the deck.
- Maximum Design Pressure: -105 psf (See Limitation #7)
- Maximum Fire Classification: See General Limitation #1.
- Maximum Slope: See General Limitation #1.



Detail Drawing
Fastener detail for 4 x 8' insulations boards
Detail No. *



STEEL DECK SYSTEM LIMITATIONS:

- 1 If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine fastener patterns and density. All testing and fastening design shall be in compliance with Protocol TAS 105 and Roofing Application Standard RAS 137.

GENERAL LIMITATIONS:

- 1 Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
- 2 Insulation may be applied in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer.
- 3 All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
- 4 An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet may be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
- 5 Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with TAS 105. If the fastener value, as field-tested, is below 275 lbf., insulation attachment shall not be acceptable.
- 6 Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within the specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer or Architect may be submitted. Said revised fastener spacing utilize the withdrawal resistance value taken from Testing Application Standard TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
- 7 Perimeter and corner areas shall comply with the enhanced uplift pressure of these areas, as calculated in compliance with applicable Building Code. Fastener densities shall be increase for both insulation and base sheet as needed calculated in compliance with Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
- 8 All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and the wind load requirements of applicable Building Code.
- 9 The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). No rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners, and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**



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NOTICE OF ACCEPTANCE STANDARD CONDITIONS

- 1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
- 2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
- 3 Renewals of Acceptance will not be considered if:
 - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
 - b) The product is no longer the same product (identical) as the one originally approved;
 - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
 - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
- 4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
- 5 Any of the following shall also be grounds for removal of this Acceptance:
 - a) Unsatisfactory performance of this product or process;
 - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
- 6 The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.
- 7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.
- 8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
- 9 This Acceptance contains pages 1 through 16.

END OF THIS ACCEPTANCE



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