

DURO-LAST DURO-ROOF[®] SYSTEM



© Duro-Last Roofing, Inc.

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DURO-ROOF™ SPECIFICATIONS

SECTION 1---GENERAL

INTRODUCTION

The Duro-Roof™ is similar to the other mechanically-fastened systems that Duro-Last offers except that it utilizes wider fastening tabs that are sealed during installation. This system allows wider fastening tab spacing and increased fastener spacing along the tabs when compared to other mechanically fastened systems. The system can be ordered with 57-inch, 87-inch or 120-inch fastening tab spacing. The pullout resistance of the fastener determines the spacing of fasteners along the tabs.

The majority of the detail drawings found in the "Mechanically Fastened" Section of the Duro-Last Specification Manual is applicable. To avoid duplication, only detail drawings specific to the Duro-Roof™ are included within this specification.

REQUIREMENTS

1. The Duro-Roof™ requires the use of 6-inch wide fastening tabs.
2. Either the Duro-Last 3-inch Square Metal Plate or Eye-Hook™ Plate may be used for membrane securement.
3. Fastening tabs should be sealed using Duro-Last Tab Sealer 4725.
4. Projects in high wind zones (≥ 120 mph) or on buildings at a height of ≥ 40 feet must have the fastening pattern designed by the Duro-Last Engineering Services Department.
5. Additional perimeter and corner enhancement may be necessary if ASCE or other wind performance specifications are required for the project.
6. If the Duro-Roof™ is installed using 120-inch tab spacing, additional perimeter fastening is always required as described in Section 3 of this specification.
7. The Duro-Last roofing system must be installed by an authorized Duro-Last contractor.
8. The Duro-Last membrane must be installed over compatible and properly prepared decks/substrates.
9. A Duro-Last quality assurance specialist must inspect the Duro-Last roofing system for compliance with the Duro-Last specifications before a commercial warranty is issued.
10. All materials used in the installation of the Duro-Last roofing system must be products of Duro-Last Roofing, Inc. or other acceptable products as defined and described in the specifications. Other materials must be pre-approved in writing by the Duro-Last Engineering Services Department prior to being used with the Duro-Last roofing system.
11. The Duro-Last contractor is responsible for following all applicable building, plumbing, electrical and safety codes as well as requirements set forth in project specifications.

DELIVERY

The Duro-Last roofing system and related materials will be shipped in the original packaging and with shipping labels intact. Containers will be labeled with manufacturer/supplier's name, product name and identification. Upon arrival, each shipment should be checked for damage or shortages. The freight agent should be made aware of any problems and must note the damage or shortage on the freight bill. Concealed damage must be reported to the freight agent immediately upon discovery. Materials damaged in shipping, handling or storage cannot be used.

HANDLING

Once the Duro-Last roofing system is delivered to the job site, the contractor is responsible for all handling and installation. Adequate personnel and equipment should be available to safely lift and place the Duro-Last roofing system onto the rooftop. The components of the roofing system should be staged near load-bearing supports in a manner convenient to final placement.

STORAGE

Duro-Last materials should be kept clean and dry. Materials should be stored on pallets and covered with tarps. Care should be taken to place materials away from areas where water may pond or areas that water falls onto from higher elevations. All sealants must be stored at temperatures above 40°F (5°C). Keep combustible materials away from heat, sparks, and open flames. Follow precautions outlined on the containers or supplied by the material manufacturer.

SECTION 2---QUALITY ASSURANCE

PRE-JOB INSPECTION

CORE CUTS

1. When re-covering an existing roofing system, the authorized Duro-Last contractor or representative appointed by Duro-Last Roofing, Inc., will conduct an inspection of the proposed job site roof conditions, determine the needed fastener type and length, moisture content of the existing roofing system, and note damaged areas to be repaired prior to installation of the Duro-Last roofing system.
2. The Duro-Last contractor is responsible for performing a series of core cuts to determine and verify the above information. The Duro-Last contractor and/or building owner is responsible for the repair of all core cuts.
3. Duro-Last Roofing, Inc. does not approve the practice of roofing over existing roofing systems that contain excess water. Excess water is defined as water observed within a core cut or moisture squeezed from the core sample taken.

PULL TEST

1. Fastener pull out tests must be conducted on the roof deck with approved fasteners to verify the integrity of the deck and to establish fastening patterns that meet the requirements of Duro-Last specifications. Contact the Duro-Last Engineering Services Department at 800-248-0280 with any questions.
2. It is the responsibility of the installer to make sure pull out tests are taken on-site by either the fastener manufacturer, the Duro-Last contractor or the Duro-Last sales representative. The sections of decking where integrity is in question should be the locations for the tests. Values must be documented on a roof drawing, locating the test pulls and pullout test values. In situations where new construction prevents on-site pullout tests, a pre-assembled deck representing the proposed deck type should be constructed and tested.
3. The number of pull tests required will be as follows: perform a minimum of 10 pull tests for up to 50,000 square feet and five additional pull tests for each additional 50,000 square feet or portion thereof, on each project. Areas of low pull test results will require additional pull tests.

FASTENER SELECTION

The fasteners used to install insulation, re-cover board and Duro-Last membrane must be supplied by Duro-Last Roofing, Inc. The following table summarizes the appropriate fasteners to use for different deck types. If a fastener type is needed that is not listed below, the Duro-Last Engineering Services Department must approve its use, in writing, prior to installation.

Deck Type	Fastener Type	Notes
Steel	Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 in. from the top surface of deck.
Wood	Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 in. from the top surface of deck.
Structural Concrete	Duro-Last Concrete Nail Duro-Last Concrete Screw Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 in. from the top surface of deck. Pre-drill a minimum of 1/2 in. deeper than the required depth of the fasteners using a 3/16 in. bit.
Gypsum	Auger Fastener* Liquid Auger Fastener**	Pre-drill required for auger fasteners. Use a 7/16–9/16 in. bit.
		* Must penetrate a minimum of 1 1/2 in. beyond top surface of deck. Factory Mutual-designed systems require minimum of 2 in. penetration.
		** Liquid Auger must penetrate a minimum of 2 in. from the top surface of the deck.
Cementitious Wood Fiber (Tectum)	Auger Fastener* Liquid Auger Fastener**	Do not pre-drill.
		* Must penetrate a minimum of 1 1/2 in. from the top surface of deck. * Factory Mutual-designed systems require minimum of 2 in. penetration.
		** Liquid Auger must penetrate a minimum of 2 in. beyond the top surface of the deck.
Lightweight Concrete	Auger Fastener* Liquid Auger Fastener** Duro-Last Concrete Screw Duro-Last Concrete Nail Duro-Last HD Screws Duro-Last XHD Screws	Pre-drill required.
		Augers: Use a 7/16–9/16 in. bit. Others: Use a 3/16 in. bit.
		* Must penetrate a minimum of 1 1/2 in. from the top surface of deck. * Factory Mutual-designed systems require minimum of 2 in. penetration.
		** Liquid Auger must penetrate a minimum of 2 in. from the top surface of the deck.
Walls and Curbs		Notes
Cinder and Concrete Block	Zinc Plated Metal Anchors Duro-Last Concrete Screw Duro-Last Concrete Nail Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 in. from the top surface. Pre-drill a minimum of 1/2 in. deeper than the required depth of the fasteners using a 3/16 in. bit (1/2 in. for metal anchors).

When determining which plates to use and where to use them, refer to the following table. This table is specific to the Duro-Roof.

	2-inch Poly-Plate	Eye-Hook™ Metal Plate	3-inch Square Metal Plate	Insulation Plate
Fastening Tabs	No	No	Yes	No
Parapet Flashings	Yes	Yes	Yes	No
Penetrations	Yes	Yes	Yes	No
Insulation	Yes	No	Yes	Yes

FASTENING PATTERN

The fastening pattern used to install the Duro-Last roofing system is determined by the pull-out resistance of the mechanical fasteners to be used and the uplift pressure that the system is designed to resist. The minimum uplift design required by Duro-Last is 60 psf. Resistance to higher uplift pressures may be required as part of a project specification or as required by state building codes. Contact the Duro-Last Engineering Services Department for assistance in determining the fastening patterns for the specific uplift design pressures or if the project is located in the state of Florida.

The tables below are used to determine the appropriate fastening pattern for a project for which the pullout resistance and required uplift design are known. The pullout result column shows the minimum resistance required to utilize the tab and fastener spacing shown for a given uplift design. The fastening patterns shown are for the field of the roof. If the project requires enhancement in the perimeter and corner areas, contact the Duro-Last Engineering Services Department for assistance.

57" Tab Spacing

Pullout Resistance (lbf.)	Fastening Spacing in. (m)	Uplift Design (psf)
570	24 (.61)	60
500	21 (.53)	60
430	18 (.46)	60
360	15 (.38)	60
285	12 (.30)	60
215	9 (.23)	60
145	6 (.15)	60
715	24 (.61)	75
625	21 (.53)	75
535	18 (.46)	75
445	15 (.38)	75
360	12 (.30)	75
270	9 (.23)	75
180	6 (.15)	75
825	21 (.53)	90
640	18 (.46)	90
535	15 (.38)	90
430	12 (.30)	90
325	9 (.23)	90
215	6 (.15)	90
825	18 (.38)	120
715	15 (.38)	120
570	12 (.30)	120
430	9 (.23)	120
285	6 (.15)	120
750	9 (.15)	210
500	6 (.23)	210

87-inch Tab Spacing

Pullout Resistance (lbf.)	Fastening Spacing in. (m)	Uplift Design (psf)
825	21 (.53)	60
650	18 (.46)	60
540	15 (.38)	60
435	12 (.30)	60
325	9 (.23)	60
215	6 (.15)	60
825	18 (.46)	75
675	15 (.38)	75
540	12 (.30)	75
405	9 (.23)	75
270	6 (.15)	75
825	15 (.38)	90
650	12 (.30)	90
485	9 (.23)	90
325	6 (.15)	90
825	12 (.30)	120
650	9 (.23)	120
435	6 (.15)	120
825	9 (.15)	150
545	6 (.23)	150
825	6 (.23)	210

120-inch Tab Spacing

Pullout Resistance (lbf.)	Fastening Spacing in. (m)	Uplift Design (psf)
825	15 (.38)	60
600	12 (.30)	60
450	9 (.23)	60
300	6 (.15)	60
750	12 (.30)	75
565	9 (.23)	75
375	6 (.15)	75
825	9 (.23)	90
450	6 (.15)	90
600	6 (.15)	120
825	6 (.15)	150

Note: Projects in high wind zones (≥ 120 mph) or on a building with a height of ≥ 40 ft. must have the fastening pattern designed by the Duro-Last Engineering Services Department.

DECK/SUBSTRATE CRITERIA AND PREPARATION

The substrate should be clean, smooth and free of fins, sharp edges and loose, foreign materials. Any portions of the substrate or protrusions that could affect the installation of the membrane must be repaired.

Direct application of the Duro-Last membrane is permitted when applied over new smooth-troweled concrete, new lightweight insulating concrete, new plywood, OSB, wood planking and cementitious wood fiber. All other surfaces require a minimum slip-sheet or re-covery board prior to installation of the Duro-Last membrane.

When re-roofing after a full tear-off, direct application of the Duro-Last membrane to the substrate is not allowed.

When roofing over asphalt or coal tar roofs (including full tear-off) an insulation or slip-sheet having an approved facer must be used. If the existing system remains, all blisters must be cut down and secured with screws and plates to create a level roof surface. If water is present under the existing system, remove it along with any wet insulation. Resulting voids should be built up level to the surrounding roofing surface. A slip-sheet (minimum three-mil polyethylene) is required. The slip-sheet shall be overlapped six inches and fastened to hold in place.

CONCRETE: (New construction or re-cover)

Concrete decks shall be smooth and have no joints or cracks greater than 1/4-inch. Sharp stones sticking out of concrete and sudden changes in elevation due to the pouring forms, etc. shall be ground down. If the concrete is not troweled smooth, a minimum of 3/8-inch underlayment must be installed over deck prior to membrane installation.

METAL DECK (New construction or re-cover)

A metal deck requires a minimum layer of 1/2-inch hardboard (gypsum, plywood, or oriented strand board) or one-inch rigid insulation prior to the installation of the Duro-Last membrane. Replace all deteriorated decking. It is the responsibility of the contractor to ensure that the selected insulation is adequate to span the flutes of the deck. If it is not, the flutes must be filled with an approved insulation. See "Insulation Selection and Installation" for further details.

WOOD DECK (New construction or re-cover)

Plywood decks (15/32-inch minimum) shall be clean, smooth, and have no joints or cracks greater than 1/4-inch. Plywood shall be installed with nails or screws. If staples have been used, re-fasten the deck with nails or screws. If H-clips are used, cover them with duct tape or overlay the entire deck with an approved underlayment or rigid insulation. Replace all deteriorated decking.

CEMENTITIOUS WOOD FIBER (New construction or re-cover)

Cementitious wood fiber (Tectum) decks shall be clean, smooth and have no joints or cracks greater than 1/4-inch. Replace all deteriorated decking.

UNDERLAYMENT REQUIREMENTS

The following products are compatible with the Duro-Last membrane:

- C.P.E. Roofing
- Cellular Glass Boards
- EPDM
- Gypsum
- Plywood/Wood Plank
- Concrete
- Cementitious Wood Fiber
- Glass Fiber Board
- Iso Board

The following surfaces require these minimum separations between the Duro-Last membrane and the substrate:

Surface	Separator
Acrylic Coatings	Slip-sheet *
Coal Tar	Slip-sheet *
Coated/Uncoated Asphalt	Slip-sheet *
Fine Crushed Stone (BUR)	3/8-inch underlayment
Expanded Polystyrene (EPS)	Slip-sheet *
Extruded Polystyrene (EXPS)	Slip-sheet *
Granulated Cap Sheet	Slip-sheet *
Metal Deck	One-inch rigid insulation
C.S.P.E. (hypalon)	Slip-sheet *
Modified Bitumen	Slip-sheet *
Vinyl Coated Metal	Slip-sheet *
PVC/CPA Roofing	Slip-sheet *
Pea Gravel over asphalt	3/8-inch underlayment
Polyurethane foam roofs	Slip-sheet *
Shingles	Slip-sheet *

* Minimum 3-mil Polyethylene or Polypropylene or other approved underlayment.

SECTION 3---IMPLEMENTATION

INSTALLATION

WOOD NAILER

- a) Wood nailers must be a #2 grade lumber, or better and must be fastened to the deck, wall or existing secured nailer in such a manner that they resist 180-lbs. (2,643 N/M) of force per linear foot of nailer in any direction. Fasteners used to attach wood nailers must be spaced no greater than 18-inches (.46 m) apart. Wood nailers are required in any situation where 1-inch (25 mm) or greater of insulation is added to the roof perimeter edge. The top of the nailers must be flush with the top of the insulation. Wood nailers are not required at a change of plane such as the intersection between a parapet wall and the decking.
- b) Duro-Last Engineering Services requires that for nailers and other lumber supports identified as ACQ or CA treated, only stainless steel fasteners be used. Additionally, for all new construction, untreated lumber should be used for nailers with standard e-coated fasteners. Further, treated lumber dating 2003 or earlier is acceptable for use with e-coated fasteners as lumber over two years of age is unlikely to contain the copper based treatments.

INSULATION SELECTION AND INSTALLATION

- a) Insulation products must be neatly fitted to the roof deck and its penetrations. Insulation boards measuring 4' x 8' must be attached with a minimum of five fasteners. No gap should exceed 1/4-inch (6 mm) in width. No more insulation products should be installed than can be covered with membrane and completed before the end of the day's work or before the onset of inclement weather. Duro-Last fasteners and Duro-Last plates as well as approved fastening patterns are required for the attachment of all insulation products.
- b) The minimum compression characteristics of insulation products as determined by ASTM D-1621 will be as follows:
 - Polyisocyanurate products: 20 PSI (137.8 kPa)
 - Fiberglass products: 16 PSI (110.3 kPa)
 - Extruded polystyrene products: 25 PSI (172.3 kPa)
 - Expanded polystyrene products: 15 PSI (124.1 kPa) and 1.5 PCF (24 Kg/m³) density (certified) and a minimum 1-inch (25 mm) thick.
 - Expanded polystyrene products covered with or laminated to a hardboard facer: 12 PCI (82.7 kPa) and 1.25 PCF (20 Kg\m³) density and a minimum of 1-inch (25 mm) thick.

MEMBRANE INSTALLATION

- a) The prefabricated roof section should be positioned on the deck to expose the first 6-inch securement tab. Place fasteners and plates in the **center of the tab** and at the spacing along the tab required to meet the fastening pattern. Only the square 3-inch Metal Plates can be used in conjunction with the tab sealer. If auger fasteners are being used, the plates that are supplied with them should be used.
- b) After the fasteners have been installed, apply the Duro-Last Tab Sealer 4725 to the top of the fastening tab and also to the bottom side of the membrane that will cover the fastening tab (see detail 9500). The application rate for this 2-sided application must be 30 square feet per gallon of tab sealer. This application rate will cover both sides along 30 feet of the tab. Use a solvent resistant 9-inch medium nap paint roller to apply the sealer in an even coat with no puddles or globs. When not in use, keep the tab sealer container closed. See the Cautions and Warnings" section regarding the open time of the sealer.
- c) Once the tab sealer has been applied, quickly unfold the roof section to expose the next fastening tab. Pull the membrane taut and then push the membrane into the adhesive using a heavy-duty squeegee. Take care to eliminate any air pockets. This step must be done before the tab sealer tacks up or else an additional coat of sealer will need to be applied.
- d) Repeat the steps above until the roof section is completely attached.
- e) Position the next roof section to provide a 9-inch overlap along the edge parallel with the fastening tabs. After securing the reverse tab(s), if present, on the new section, the tab sealer may be applied so that it covers a 6-inch wide strip at the edge of the previous section. The tab sealer must also be applied to the bottom side of the new section. Care must be used to keep the tab sealer off of the membrane where the hot air weld will occur. It may be helpful to place a length of wood (or chalk a line) to define where the tab sealer should stop. Again, use a squeegee to push the membrane into the adhesive and to remove air pockets.

- f) Tab sealer is not required along “end-laps” between roof sections and the overlap only needs to be 6 inches.

PERIMETER MEMBRANE INSTALLATION

- a) The first tab on all perimeter roof section(s), parallel with the roof edge or parapet wall must be between 24-36 inches (.6 m and .9 m) from the edge or the wall. If the parapet wall is greater than 24-inches (.6 m) tall, a perimeter tab is not required.
- b) If 120-inch tab spacing is being used, the perimeter edge must be enhanced using tabs placed at 31-inches and 88-inches from the beginning of the roof section. This must be done along **all** exposed perimeter edges of the building, regardless of parapet wall heights. Refer to the specification for the 10-Foot Tab System or contact the Engineering Services Department with questions.
- c) On buildings where multiple levels of roof exist, such as equipment penthouses, a roof perimeter edge is defined as any roof having a vertical height difference 3 feet or greater than the lower roof areas surrounding it. If this condition exists, the roof level must be treated as a separate roof and will require a perimeter tab placement as described above.

HOT AIR WELDING

- a) Position the membrane so as to allow an overlap of the top membrane onto the bottom membrane a minimum of 9-inches. Ensure the welding area is clean and free of foreign material.
- b) Weld the top membrane to the bottom membrane using a hand-held welder or an automatic welding machine, and silicone roller. A minimum 1 1/2-inch (38 mm) wide continuous weld is required.
- c) All field-welded seams must be inspected with a tack claw and all deficiencies repaired prior to inspection by Duro-Last.

FLASHINGS

- a) The Duro-Last membrane must not contact surfaces, including all insulated chimney pipes, exhaust pipes and combustible fuel pipes, which maintain or exceed temperatures of 120°F.
- b) All flashings must be terminated at a minimum of 8-inches above the roof surface.
- c) See “Mechanically Fastened” details section for installation references.

TWO WAY AIR VENT

- a) Two-Way Air Vents must be installed at a rate of one vent for every 1,000 square feet of deck area.
- a) Two-Way Air Vents are not to be installed near drains or in valleys.
- a) Two-Way Air Vents must be evenly spaced across the roof area and centered between rows of fastening tabs.
- a) See Details 5010 & 5020 for installation references.

ROOF DRAINS

- a) All existing roofing materials must be removed from drain bowl and clamping ring. After the Duro-Last membrane is properly installed onto the bowl and the clamping ring set in place, all bolts securing the ring must be installed to provide constant, even compression on the sealant (½ tube min). If bolts are broken or missing, replacements must be installed.
- b) If the Duro-Last drain boot is to be used, apply ½ tube of sealant (min) to the outside of the drain boot and insert it into the drain. Install composite compression drain rings as low into the drain as possible.
- c) See Details 2011, 2020, 2021, 2025, 2030, 2041 & 2050 for installation references.

EXPANSION JOINTS

See Details 1140, 1150, 1160, 1170 & 6160 for installation references.

PITCH PAN

- a) Use pitch pans only when standard Duro-Last flashings cannot be used.
- b) Only Duro-Last self-leveling pitch pan sealers may be used when creating a pitch pan.
- c) See Details 4030, 4040 and 4045 for installation references.

WALKWAY PAD

Duro-Last Roof Trak[®] II Walkway Pad is recommended at all roof access points, service units and high traffic areas. Building owners who choose not to purchase the Roof Trak II Walkway Pad increase their risk of potential third party damage to the Duro-Last Roofing System. **Note:** Weld only one side of the Walkway Pad if it will be covering any field seams. This will allow the Duro-Last Technical Representative to inspect the entire field seam.

CAUTIONS AND WARNINGS

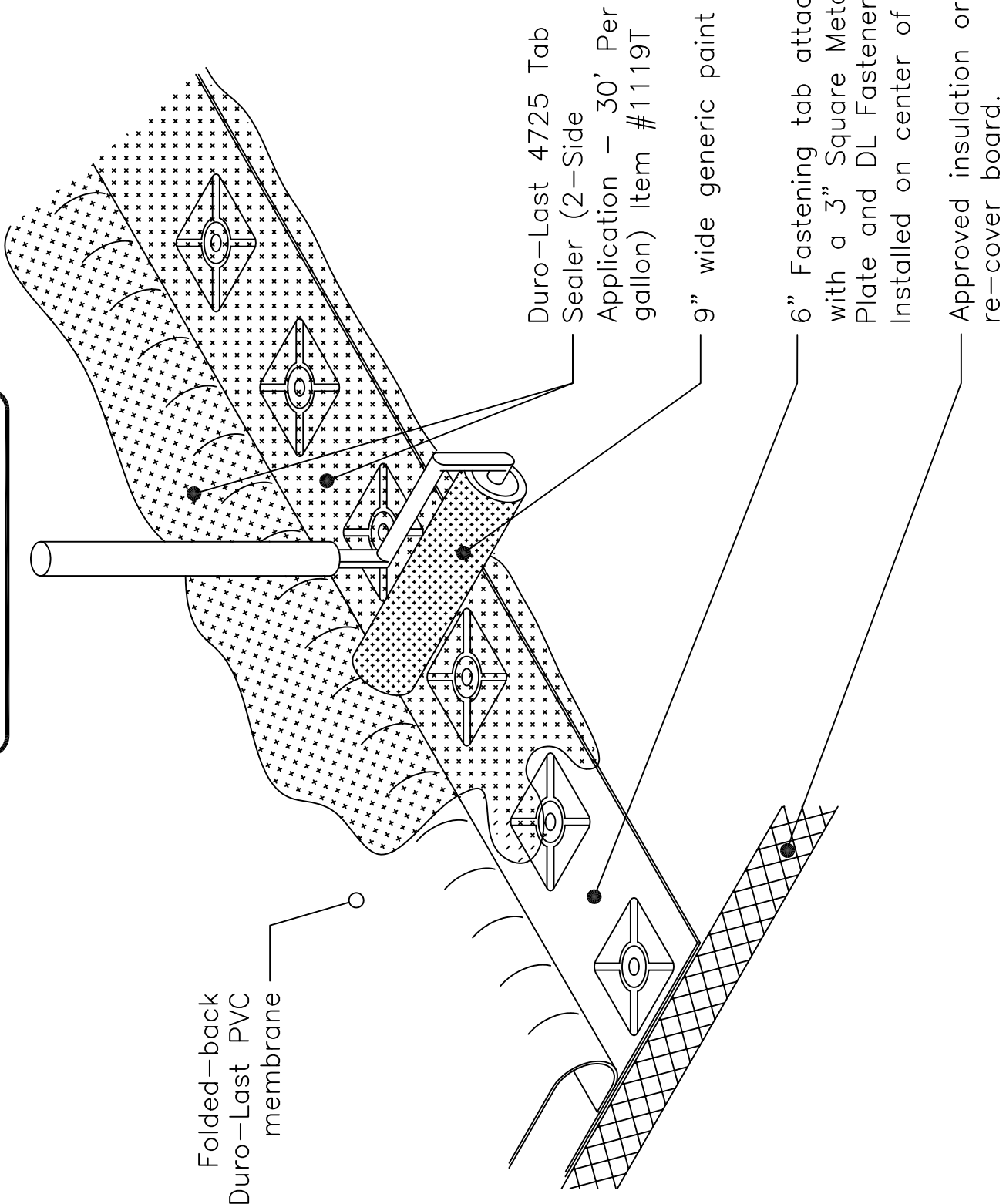
1. Open time for the Duro-Last Tab Sealer 4725 is 20 minutes. **Do not exceed this open time.**
2. Duro-Last Tab Sealer 4725 must **not** be applied to the membrane where a field weld will occur.
3. See “Product Data Sheet” for Duro-Last Tab Sealer 4725 for additional information.
4. The ambient air temperature and the substrate temperature must be 40° F, or higher, before proceeding with installation. Do not use the tab sealer if the temperature is expected to drop below freezing within 48 hours.
5. Protect tab sealer from freezing. Store product between 50°F and 70°F for maximum shelf life. Do not store below 40°F. Shelf life is one year in unopened container when following recommended storage procedures.
6. Duro-Last Roofing, Inc. will not be responsible for damage that may occur as a result of the dew point falling within a roof deck subassembly or building.
7. Asphalt-based products are incompatible with the Duro-Last roofing membrane. Should the Duro-Last membrane become contaminated with roofing asphalt, the affected membrane must be cleaned immediately with approved cleaners and procedures. If the asphalt cannot be properly removed from the membrane, the affected membrane must be removed and new membrane installed, or the affected area must be overlaid with an approved slip-sheet and new membrane. Extreme caution should be taken if you are doing a tear-off while installing the membrane.
8. EPS insulation cannot be used over coal tar pitch or asphalt without a slipsheet. Duro-Last underlayments are approved for direct application over aged coal tar pitch roofs.
9. The Duro-Last membrane must not be in contact with substrates that maintain or exceed temperatures of 120° F including all insulated chimney pipes and combustible fuel pipes. See “Mechanically Fastened” details section for installation references.
10. Duro-Last Roofing, Inc. does not approve the practice of roofing over existing roofing systems that contain excess water. This is water observed by taking core cuts, seeing standing water in the core or having water flowing into the cut, or squeezing the core sample and getting water droplets.
11. All Polystyrene insulation (Styrofoam, Formular, Dow, EPS, etc. - blue, white, gray, green, or pink) must have an approved nonstyrene facer or a 3-mil polyethylene slip-sheet covering when installed in contact with existing or new PVC membranes. Polyethylene or polypropylene facers are acceptable only after testing, and approval by Duro-Last for compatibility.
12. Phenolic foam is not an approved insulation in new construction or re-roofing applications. The Duro-Last roofing system should not under any circumstance be installed over phenolic foam.
13. If asbestos is encountered, the building owner must be notified at once. The owner is solely responsible for determining the proper course of action.
14. A Duro-Last Roof System should not be installed if one or more of the following conditions exist:
 - a. The building structure is not sufficient to withstand the weight of the completed system.
 - b. It is not possible to find an approved fastener that will properly hold in the substrate.
 - c. Roofs are subject to hot embers, slag or burning debris.
 - d. Incompatible chemicals are exhausted directly onto the roof or may come in contact with the roof in liquid form. (See Chemical Resistance in the General Section of the Specification Manual)
 - e. Steam is exhausted directly onto the roof that is in excess of 120° F.
15. Perlite and/or mineral fiberboard **are not** acceptable substrates for the Duro-Last membrane.



DURO-LAST, INC.

525 Morley Drive
Saginaw, MI 48601

DETAIL 9500



Folded-back
Duro-Last PVC
membrane

Duro-Last 4725 Tab
Sealer (2-Side
Application - 30' Per
gallon) Item #1119T

9" wide generic paint roller

6" Fastening tab attached
with a 3" Square Metal
Plate and DL Fastener
Installed on center of tab.

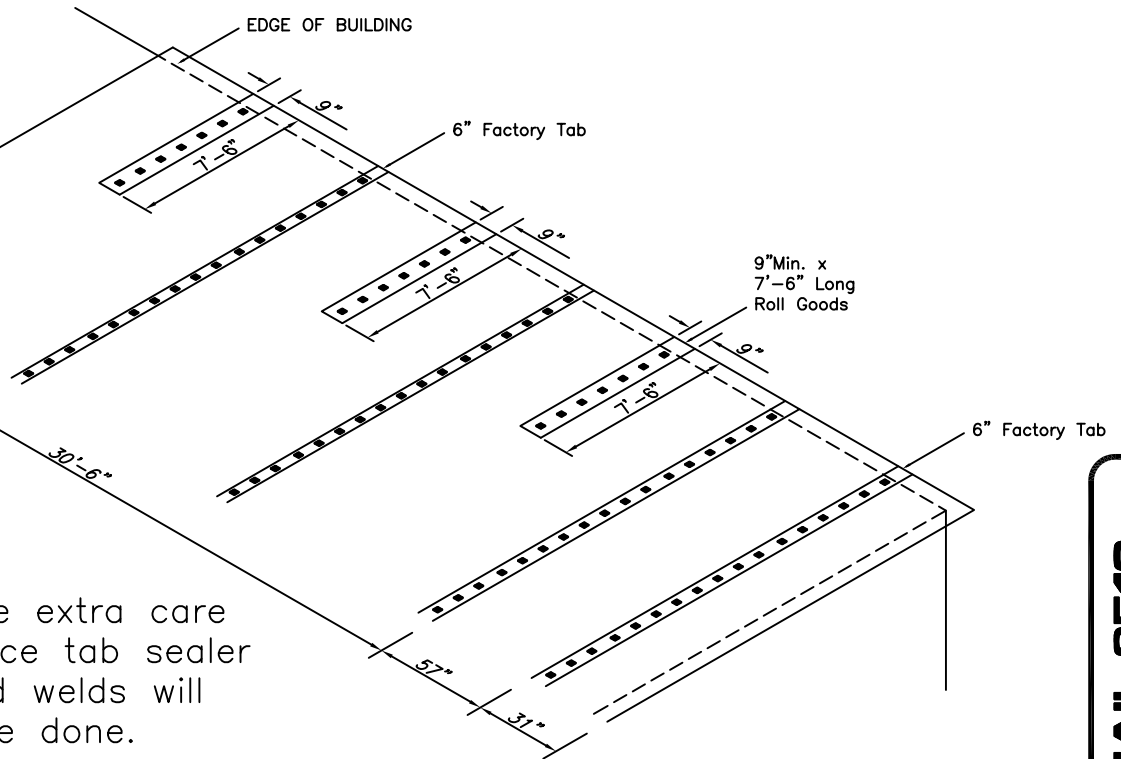
Approved insulation or
re-cover board.

DATE: DECEMBER 2005	DURO-ROOF SYSTEM
DRAWN BY: ENG. DEPT.	ADHESIVE APPLICATION
SCALE: NONE	NEW CONSTRUCTION OR REROOF



DURO-LAST, INC.

525 Morley Drive
Saginaw, MI 48601



NOTE: Take extra care not to place tab sealer where field welds will need to be done.

1. Down the center of 9" wide (min.) Roll Goods, mechanically fasten 3" square metal plates with a Duro-Last fastener. Fastener frequency will be determined by the pull resistance charts for the "Duro-Roof" System.
2. Position the decksheet to its location and begin to attach it according to the "Duro-Roof" specifications.
3. Apply the tab sealer over the mechanically attached roll goods and the bottom side of the deck sheet where the roll good will come into contact with the backside of the decksheet.
4. Smooth the membrane into the roll goods, being sure to remove all air pockets. Continue this process for each additional strip of roll goods installed.
5. This is to be used only where the fastening tabs of the decksheet run perpendicular to a roof edge.

DETAIL 9510

DATE: DEC. 2005	DURO-ROOF SYSTEM
DRAWN BY: ENG. DEPT.	OPTION FOR EDGE REQ'MNTS (10'-TABS)
SCALE: NONE	NEW CONSTRUCTION OR REROOF

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