



HISTORIC DISTRICT COMMISSION APPLICATION FOR WORK APPROVAL

City of Detroit - Planning & Development Department
2 Woodward Avenue, Suite 808
Detroit, Michigan 48226

APPLICATION ID

HDC2025-00642

PROPERTY INFORMATION

ADDRESS(ES): 2725 West Boston Blvd

HISTORIC DISTRICT: Boston-Edison

SCOPE OF WORK: (Check ALL that apply)

- | | | | | | |
|---|--|--|--|--|--------------------------------|
| ☒ Windows/
Doors | ☒ Walls/
Siding | ☐ Painting | ☒ Roof/Gutters/
Chimney | ☐ Porch/Deck/Balcony | ☐ Other |
| ☐ Demolition | ☐ Signage | ☐ New
Building | ☐ Addition | ☒ Site Improvements
(landscape, trees, fences,
patios, etc.) | |

BRIEF PROJECT DESCRIPTION:

West Boston 2 Apartments was originally constructed in 1927 and renovated with Low Income Housing Tax Credits in 2006. MHT received an award from MSHDA's Round 18 Gap Financing Program to leverage new debt and equity, along with MSHDA Gap funds, to complete a much needed rehabilitation of the property. This will allow for major capital improvements through the repair or replacement of several building components that have reached the end of their useful lives. The rehab will not be altering the footprint of the building.

APPLICANT IDENTIFICATION

TYPE OF APPLICANT: Contractor

NAME: Paul Stoddard

COMPANY NAME: MHT Construction

ADDRESS: 32500 Telegraph

CITY: BINGHAM FARMS

STATE: MI

ZIP: 48025

PHONE: +1 (947) 224-8834

EMAIL: pstoddard@mhthousing.net

I AGREE TO AND AFFIRM THE FOLLOWING:

- ☒ I understand that the failure to upload all required documentation may result in extended review times for my project and/or a denied application.
- ☒ I understand that the review of this application by the Historic District Commission does not waive my responsibility to comply with any other applicable ordinances including obtaining appropriate permits (building, sign, etc.) or other department approvals prior to beginning the work.
- ☒ I hereby certify that the information on this application is true and correct. I certify that the proposed work is authorized by the owner of record and I have been authorized to make this application as the property owner(s) authorized agent.

DocuSigned by:

Paul Stoddard

MHT Construction

Paul Stoddard

10/13/2025

SIGNATURE

DATE

32500 Telegraph

BINGHAM FARMS MI 48025

+1 (947) 224-8834

pstoddard@mhthousing.net

Questions? Contact us at hdc@detroitmi.gov or (313)224-1762

NOTE: Based on the scope of work, additional documentation may be required. See www.detroitmi.gov/hdc for scope-specific requirements.

PROJECT DETAILS – TELL US ABOUT YOUR PROJECT

Instructions: Add project details using the text box in each section. If your details exceed the space provided, attach the details via the attachment icon for that section.

ePLANS PERMIT NUMBER:

(only applicable if you've already applied for permits through ePLANS)

BLD2025-01870

GENERAL

1. DESCRIPTION OF EXISTING CONDITION

Please tell us about the current appearance and conditions of the areas you want to change. You may use a few sentences or attach a separate prepared document on the right. (For example, "existing roof on my garage is covered in gray asphalt shingles in poor condition.")

The exterior of the building shows signs of age and is in need of renovation. The brick façade has staining from water drainage, and the roof, gutters, and downspouts are nearing the end of their service life. The exterior doors have experienced heavy wear, and many of the windows are deteriorated and require replacement. Character-defining features such as the clay roof shingles, Juliet balconies, brick detailing, and elevated unit porches remain in place but are in poor condition and need repair to preserve their historic appearance. Landscaping around the buil

2. PHOTOGRAPHS

Help us understand your project. Please attach photographs of all areas where work is proposed.



3. DESCRIPTION OF PROJECT

In this box, tell us about what you want to do at the areas described above in box #1. (For example, Install new asphalt shingle roofing at garage.)

Install new roof (flat & clay tiles), gutters and downspouts. Install new windows and exterior doors. Install new exterior lighting fixtures and security system. Power wash & tuck pointing brick façade. Renovate façade detail work. Sand & paint balcony railings and fencing. Replace broken concrete sidewalk and steps as needed. Re-mill asphalt parking lot and paint new parking spots. Trim existing plants.



4. DETAILED SCOPE OF WORK

In this box, please describe all steps necessary to complete the work described in box #3. (For example, "remove existing shingles, replace wood deck as necessary, replace wood eaves, install roof vents, replace rotted fascia boards, paint, clean worksite.")

See attached scope of work



5. BROCHURES/CUT SHEETS

Please provide information on the products or materials you are proposing to install. For example, a brochure on the brand and color of the shingles proposed.



ADDITIONAL DETAILS

6. WINDOWS/DOORS Detailed photographs of window(s) and/or door(s) proposed for replacement showing the condition of the interior and exterior of the window(s) and/or door(s)	
8. SITE IMPROVEMENTS If site improvements are proposed, please provide any relevant site improvement plans pertaining to your project.	



Kem-Tec, A Group of Companies
Professional Engineering, Surveying & Environmental Services
22556 Gratiot Avenue, Eastpointe, Michigan 48021
Phone: (586) 772-2222 Fax: (586) 772-4048

West Boston Apartments

Proposed Scope of Work

2725 West Boston Blvd, Detroit, MI 48206

Site Work

- FULL RESURFACE OF PARKING LOT.
- REPLACE EXISTING DAMAGED CONCRETE WITH NEW CONCRETE.
- ADD BUMPER BLOCKS TO EAST SIDE OF PARKING LOT
- REFURBISH FENCE (SAND/PRIME/PAINT),
- UPDATE SECURITY SYSTEMS
- TRIM TREES AS NEEDED

Building Exterior

- REPAIR/REPLACE SHINGLE & FLAT ROOF.
- REPLACE ROOF ACCESS DOOR.
- REPLACE WINDOWS & DOORS.
- REPAINT FRENCH BALCONY RAILINGS
- BRICK TUCKPOINTING AND POWER WASHING
- REPLACE WALL SCONCES
- REPLACE GUTTERS AND DOWNSPOUTS
- REPLACE WOOD TRIM

Mechanical

- HEATING BOILER TO BE REPLACED TO HAVE AT LEAST 85% EFFICIENCY.
 - REPLACE MIXING CONTROL 365 PANEL/TACO.
 - REPLACE IN-LINE 1/3HP CAST IRON PUMPS.
 - REPLACE IN-LINE 1.5HP 3 PLACE CAST IRON PUMPS.
 - REPLACE IN-LINE 3/4HP 3 PIECE CAST IRON PUMPS
 - REPLACE HEAT EXCHANGERS.
 - REPLACE 120 GALLON BUFFER TANK/HYDRAULIC SEPARATOR.
- PROVIDE FOR A REPLACEMENT CHILLER (**CARRIER** | MODEL 30RC-30)
 - REPAIR/REPLACE DISTRIBUTION PIPING AS NEEDED.
 - REPLACE FAN COIL UNITS.
- ELEVATOR MACHINE ROOM TO BE BROUGHT TO CURRENT CODE, INCLUDING COOLING SYSTEM (**FRIEDRICH** | UNI-FIT SERIES, **CARRIER** | PERFORMANCE SERIES, OR EQUIVALENT.)

Plumbing

- REPLACE KITCHEN SINK AND FAUCET.



Kem-Tec, A Group of Companies
Professional Engineering, Surveying & Environmental Services
22556 Gratiot Avenue, Eastpointe, Michigan 48021
Phone: (586) 772-2222 Fax: (586) 772-4048

- REPLACE LAVATORY AND FAUCET.
- REPLACE WATER CLOSET.

Elevator

- ELEVATOR CAB - FULL REFURBISHMENT WHICH INCLUDES FINISHES AND DOOR/FLOOR BUTTONS.
- CONTROLLER/DISPATCHER - COMPONENT REPLACEMENT. UPGRADE AS NEEDED.
- HOISTING MACHINE - REPLACEMENT.

Electrical

- REPLACE EXISTING LAUNDRY/STORAGE LIGHT FIXTURES TO LED.
- REPLACE EXISTING EXIT SIGNS WITH LED.
- REPLACE EXISTING EMERGENCY LIGHTS WITH LED.
- REPLACE STAIRWELL LIGHT FIXTURES TO LED.
- REPLACE ALL UNIT LIGHTING TO LED.
- REPLACE UNIT GFI'S.
- REPLACE INTERCOM SYSTEM.
- REPLACE EXTERIOR WALL PACKS TO LED.
- REPLACE EXTERIOR BUILDING ENTRY LIGHTS FIXTURES TO LED.
- ADD SMOKE/CARBON MONOXIDE ALARM.
- REPLACE ZINSCO HOUSE PANELS.
- UPGRADE/REPLACE FULL DIGITAL SURVEILLANCE SYSTEM.
- REPLACEMENT OF PANELS & BUZZER SYSTEMS FOR INTERCOMS.

Building Interior

- REFURBISH UNIT ENTRY DOORS (PAINT & NEW HARDWARE). REPLACE ANY DAMAGED DOORS.
- REFURBISH/REPLACE IF NEEDED OF BATHROOM, BEDROOM, MECHANICAL DOORS IN UNITS.
- REPLACE KITCHEN CABINETS.
- REPLACE BATHROOM VANITY.
- REFURBISH TUBS & SURROUNDS BY REGLAZING, TILE REPAIR & NEW HARDWARE IF NEEDED.
- REPLACE BATHROOM ACCESSORIES.
- REPLACE KITCHEN FLOORING.
- REPLACE BATHROOM FLOORING.
- REPLACE KITCHEN APPLIANCES.
- PAINT BATHROOM AND KITCHEN.
- PAINT COMMON AREAS.



Kem-Tec, A Group of Companies
Professional Engineering, Surveying & Environmental Services
22556 Gratiot Avenue, Eastpointe, Michigan 48021
Phone: (586) 772-2222 Fax: (586) 772-4048

- REPLACE COMMON AREA FLOORING.
- REPAIR & PAINT STAIR TREADS.
- REPLACE CURRENT VINYL STAIR LANDINGS.
- REFURBISHMENT/RE-GROUTING OF LOBBY CERAMIC TILES.
- REPLACE MAILBOXES.















WEST BOSTON 2
APARTMENTS
2725 W Boston
(313) 778-1470























	ELECTRIC METER
	ELECTRIC PANEL
	UTILITY POLE
	GAS METER
	GAS VALVE
	LIGHT POLE WITH STREET LAMP
	SEWER MANHOLE
	SQUARE CATCH BASIN
	FIRE HYDRANT
	WATER GATE MANHOLE
	AIR CONDITIONING UNIT
	LIGHTPOST/LAMP POST
	MAIL BOX
	EXISTING LANDSCAPING
	PARCEL BOUNDARY LINE
	ADJOINER PARCEL LINE
	EASEMENT (AS NOTED)
	RIGHT-OF-WAY
	BUILDING
	CONCRETE CURB
	EDGE OF PAVEMENT
	FENCE (AS NOTED)
	WALL (AS NOTED)
	OVERHEAD UTILITY LINE
	GAS LINE
	SEWER LINE
	WATER LINE
	BUILDING AREA
	ASPHALT
	CONCRETE
	GREEN SPACE / LANDSCAPE AREA





SERIES 200 DOUBLE-HUNG VINYL WINDOWS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Replacement Windows.
 - 1. Double hung windows

1.2 RELATED SECTIONS

- A. Section 05450: Cold Formed Metal Framing.
- B. Section 06100: Rough Carpentry.
- C. Section 06200: Finish Carpentry.
- D. Section 07460: Siding.
- E. Section 07920: Joint Sealants.

1.3 REFERENCES

- A. AAMA/WDMA/CSA 101/I.S.2/A440-17 North American Fenestration Standard / Specification For Windows, Doors, And Skylights.
- B. AAMA 902-14 - Voluntary Specification for Sash Balances.
- C. ASTM E 283-04 (2012) - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen.
- D. ASTM E 330-14 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- E. ASTM E 2190-10 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units.
- F. NFRC 100-2020 / 200-2020 – Procedure for Determining Fenestration Product U-Factors and Solar Heat Gain.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit the following documents for each type of window.
 - 1. Manufacturer's technical data, product descriptions and installation guides.
 - 2. Elevation for each style window specified indicating its size, glazing type, muntin type and design.
 - 3. Manufacturer's head, jamb and sill details for each window type specified.

Crystal[®]

WINDOW & DOOR

SECTION 08560

- C. Verification Samples: Provide operating units of each style window specified.
 - 1. Verification samples may be operating scaled-down mock-ups of actual-size units.
 - 2. Operating hardware such as balances, sash locks and weather-stripping.
 - 3. Verification samples will be returned to manufacturer's representative at project closeout.
- D. Test Reports: Submit certified independent testing agency reports indicating window units meet or exceed specified performance requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum ten (10) years producing vinyl (PVC) windows.
- B. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size.
- C. Provide window units independently tested and found to be in compliance with AAMA/WDMA/CSA 101/I.S.2/A440-17 performance standards listed above.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship and color are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver windows to project site in undamaged condition; handle windows to prevent damage to components and to finishes.
- B. Store products in manufacturer's unopened packaging, out of direct sunlight or high temperature locations, until ready for installation.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Submit manufacturer's standard warranty against defects in workmanship and materials.
 - 1. Limited Lifetime Limited Transferable warranty on extruded solid vinyl member and component parts. Insulated glass is warranted against material obstruction of transparency resulting from film formation or dust collection on the interior glass surfaces for a period of twenty (20) years. Consult warranty for complete details.
 - 2. The warranty period for commercial project work such as apartments, housing authorities and other buildings not used by individual homeowners is 10 years, covering all vinyl, glass and component parts. Consult warranty for complete details.

PART 2 PRODUCTS



2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Crystal Window & Door Systems located at: 31-10 Whitestone Expressway, Flushing, NY 11354; Tel: 718.961.7300; Fax: 718.460.4594; Email: marketing@crystalwindows.com ; Web: www.crystalwindows.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- D. Substitutions must be submitted to Architect two weeks prior to bid opening.

2.2 DOUBLE HUNG - CRYSTAL SERIES 200 (Replacement)

- A. Performance:
 - 1. Structural Rating: R-PG50-H - Test Size: 40 inches x 63 inches in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-17
 - 2. Air Test Performance Requirements:
 - a. Air infiltration maximum 0.30 cfm per square foot at 1.6 psf pressure differential when tested in accordance with ASTM E283 for sliding sealed products.
 - 3. Water Test Performance Requirements:
 - a. No uncontrolled water leakage at 7.52 psf static pressure differential when tested in accordance with ASTM E331 and ASTM E547.
 - 4. Forced Entry: Grade 10 in accordance with ASTM F 588.
 - 5. Thermal Transmittance: The following values are in accordance with NFRC 100 and NFRC 200.
 - a. With Low-E / Argon: U-Factor - 0.29
- B. Operation: Sash shall be counterbalanced to remain in any place during operation. Both sashes shall tilt in for cleaning exterior glass surface.
- C. Materials: All vinyl extrusions shall be rigid 100% virgin PVC. Frame and sash rails shall have a main wall thickness of 0.075". Frame profile shall have six tubular hollows for strength and thermal efficiency. Sash profiles shall have four tubular hollows.
- D. Frame construction: Frame shall be either fitted with a head expander and sill extension or factory-applied nailing fin or J-trim. All frame corners shall be mitered and fusion welded. Frame depth shall be 3.25".
- E. Sash construction: All sash corners shall be mitered and fusion welded. There shall be integral interlock at the meeting rail. Width over 40" shall have metal reinforcements at meeting rails.
- F. Glazing: Both sashes shall utilize 7/8" thick insulating glass consisting of two sheets of 3/32" thick argon filled Low-E glass with a metal spacer system (Intercept) equipped with desiccant. A butyl sealant shall be extruded around the entire perimeter of the spacer to achieve a seal. Both sashes shall be interior glazed, back bedded with silicone, and utilize dual durometer snap-in glazing beads.
- G. Screen construction: Standard screen shall be a half screen. The screen frame shall be extruded of aluminum with all corners keyed. The screen mesh shall be charcoal fiberglass held-in-place with a flexible spline.

Crystal[®]

WINDOW & DOOR

SECTION 08560

- H. Hardware: Sash balances shall be factory calibrated constant force balances. Balance coils shall be inserted into the slot of the shoe which locks in place once sash is tilted in. Sash lock shall be cam type and finished to match the vinyl extrusion color. Sash lock shall be fastened at the lock rail by two sheet-metal color matched screws. Double locks will be standard on window widths over 24". Two vent locks shall be located on upper sash for opening the window partially.
- I. Weatherstripping: High-density woven pile shall be used in combination with continuous polyethylene rigid seal to minimize air infiltration.
- J. Finish: Shall be solid vinyl in off white or beige. .
- K. Options: Grids – Colonial, Georgian, Applied, Prairie (Flat) and Diamond aluminum in-glass in white, Beige or two tone colors are available. Glazing – Duralite spacer glass units, triple glass, obscure wire, clear wire, obscure, clear annealed, and tempered glass can be used. Oriel/ cottage window, field mulled or factory mulled units are available. Nailing fin can be used for new construction. Two tone colors are available. Roll-formed aluminum screens are available.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Contractor must verify rough opening size is of sufficient size to receive window unit and complies with manufacturer's requirements for opening clearances.
- B. Confirm that sill plate is level.
- C. Architect must be notified of unacceptable conditions before proceeding with installation.

3.2 INSTALLATION

3.3 Contractor must install window unit in accordance with manufacturer's printed instructions.

- A. Apply sealant around perimeter of window unit between nail fin and exterior sheathing of wall.
- B. Install window unit level and plumb. Center window unit in opening and secure window unit by nailing through nail fin and screw through jambs as indicated in manufacturer's instructions.
- C. Flash window in accordance with AAMA's "Standard Practice for Installation of Windows with a Mounting Flange in Stud Frame Construction".
- D. Insulate between window frame and rough opening with suitable insulation.

3.4 ADJUSTING

- A. Installer must adjust units for smooth operation without binding or racking.
- B. Installer must adjust sash locks and screens for smooth operation.

3.5 CLEANING

- A. Clean soiled surfaces and glass prior to substantial completion.

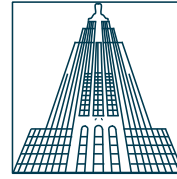


SECTION 08560

3.6 PROTECTION

- A. Protect window unit from damage until substantial completion. Repair or replace damaged units.

END OF SECTION



POE

RESTORATION & WATERPROOFING

October 3, 2025

Nino Cutraro
M & N General Contracting, LLC
972 Rankin
Troy, MI 48083
VIA EMAIL

RE: 2725 W. Boston, Detroit – Proposed Cleaning Methodology

Dear Nino,

We look forward to working with you to restore the apartment building located at 2725 West Boston. In accordance with the requirements of the Detroit Historic District Commission and the best practices outlined by the National Park Service, we have prepared the following masonry cleaning protocol for the project. This protocol is intended to guide all cleaning activities in a manner that preserves the historic character of the of the building.

Purpose and Philosophy

The intent of this cleaning protocol is to preserve the historic character, materials, and finishes of the existing masonry façade while revealing the intended architectural character and achieving a visually compatible, generally uniform appearance between historic and repaired areas and removing soiling, deposits, and biologic growth that can contribute to deterioration. Cleaning will be guided by the Detroit Historic District Commission’s Masonry Cleaning Guidelines (2018), the Secretary of the Interior’s Standards for Rehabilitation, and generally regarded best practices.

This protocol follows the preservation principle of “the gentlest means possible”. Cleaning will be performed using the least aggressive method that achieves the desired results. It is understood that masonry will not be returned to a “like-new” condition; a modest level of patina is expected and appropriate for a historic building.

Pre-Cleaning Procedures and Oversight

- Mockups: Cleaning tests will be conducted on discreet sample areas using each of the proposed methods listed below. Test panels will be reviewed for effectiveness, potential damage (e.g., etching, color change, loss of surface detail), and overall compatibility with the historic masonry.

- **Review:** The general contractor will coordinate the review and approval process in consultation with the project architect, historic consultant, and other stakeholders, including the Detroit HDC and SHPO. We commit to consulting stakeholders prior to and during the mockup process, and using their input to guide final selection of the cleaning method(s).
- **Collaboration:** At present, we have not received project-specific architectural specifications or condition reports. We will fully adhere to any requirements or recommendations issued by the project architect, historic consultant, or other designated expert, and will collaborate closely with all stakeholders, including the Detroit HDC and SHPO, throughout the work.

Cleaning Methods to Be Tested

All work will be performed by trained personnel. Only natural bristle brushes will be used; wire brushes, abrasive methods (such as sandblasting), and unregulated high-pressure washing will not be used under any circumstance.

The following methods will be evaluated in ascending order of strength:

1. **Water Rinse and Scrub**
 - Initial rinse with low-pressure water (< 100 psi).
 - Light scrubbing with natural bristle brushes.
 - Final rinse with medium water pressure (300–400 psi), continuing until rinse water runs clear.
2. **Detergent Wash (Job-Mixed Formula)**
 - Pre-wet with low-pressure water (< 100 psi).
 - Apply detergent solution (2 cups TSP, ½ cup laundry detergent, 20 quarts hot water) at low pressure.
 - Allow to dwell for 1–10 minutes.
 - Scrub with natural bristle brushes.
 - Rinse with gradually increasing water pressure not exceeding 300–400 psi until rinse water runs clear.
3. **Prosoco Enviro Klean 2010 All Surface Cleaner**
 - Pre-wet with low-pressure water (< 100 psi).
 - Apply cleaner diluted between 1:2 and 1:10 at low pressure.
 - Allow to dwell for 1–10 minutes.
 - Scrub with natural bristle brushes.
 - Rinse with gradually increasing water pressure not exceeding 300–400 psi until rinse water runs clear.
4. **Prosoco Enviro Klean Klean 'N Release Cleaner**
 - Pre-wet with low-pressure water (< 100 psi).
 - Apply cleaner diluted between 1:2 and 1:10 at low pressure.
 - Allow to dwell for 1–10 minutes.
 - Scrub with natural bristle brushes.
 - Rinse with gradually increasing water pressure not exceeding 300–400 psi until rinse water runs clear.

Sequencing and Controls

- Sample panels (approximately 3 ft. x 3 ft.) will be prepared and left to dry for 48 hours before review and approval of the selected method.
- Protections will be in place to protect adjacent materials (wood, metal, glass, and other materials) from damage.
- No cleaning will be performed in freezing conditions, when masonry is saturated/frozen, or when freezing temperatures are expected within two weeks.

Expected Outcome

The goal is to reduce soiling, pollutants, and biological growth to a level that halts deterioration, improves legibility of the masonry surface, and provides a compatible appearance while respecting the natural color, texture, and age of the materials, and avoiding the loss of historic fabric. A degree of weathering and staining will remain, consistent with the historic character of the building.

We submit this protocol for your review and coordination. Once accepted, it will serve as the basis for on-site cleaning tests and final method selection in consultation with the project architect, historic consultant, and regulatory agencies. We remain committed to ensuring that all cleaning work is performed in compliance with HDC guidelines, with the utmost care for the historic fabric of the building, and in close collaboration with you and other project stakeholders. Please let us know if you have any questions or if further adjustments are required prior to submittal to the HDC.

Best Regards,

Poe Restoration & Waterproofing

Attachments: Product Data Sheets for named cleaning products



PROSOCO®

Enviro Klean®

NEXT GENERATION CLEANERS

2010 All Surface Cleaner®

Enviro Klean® 2010 All Surface Cleaner® is a next-generation product for cleaning and degreasing light-to-heavily soiled stone, tile, masonry and much more. Powerful enough for industrial use, flexible enough for jobs around the home, space-saving EK 2010 replaces a host of individual cleaning agents. It is concentrated for the toughest industrial cleaning jobs on concrete, metal and many other plant and warehouse surfaces. EK 2010 is dilutable for home-use on windows, bathroom tub and tile, counter tops and more.

Easy-to-use EK 2010 All Surface Cleaner® is water-rinsable and contains no harsh acids, caustics or solvents. EK 2010 also removes PROSOCO's Siloxane PD over spray from windows.

ADVANTAGES

- Cleans and degreases light-to-heavily soiled stone, tile, masonry and much more.
- Effectively removes moderate biological staining.
- Dilutable for jobs around the home.
- Replaces a host of individual cleaning agents.
- Effective cleaner for windows, bathroom tub and tile, counter tops and more.
- Easy-to-use and water-rinsable.
- Contains no harsh acids, caustics or solvents.

Limitation

- Repeated use may dull polished carbonate surfaces, including but not limited to limestone, marble and travertine.

TYPICAL TECHNICAL DATA

FORM	Clear, green liquid Fresh odor
SPECIFIC GRAVITY	1.070
pH	10.5 7.8–8.2 Typical Rinse water
WT/GAL	8.90 lbs
ACTIVE CONTENT	not applicable
TOTAL SOLIDS	not applicable
VOC CONTENT	not applicable
FLASH POINT	>200° F (>93° C) ASTM D 3278
FREEZE POINT	32° F (0° C)
SHELF LIFE	3 years in tightly sealed, unopened container

SAFETY INFORMATION

Always read full label and SDS for precautionary instructions before use. Use appropriate safety equipment and job site controls during application and handling.

24-Hour Emergency Information:
INFOTRAC at 800-535-5053

REGULATORY COMPLIANCE

VOC Compliance

Enviro Klean® 2010 All Surface Cleaner® is compliant with all national, state and district VOC regulations.

Product Data Sheet

Enviro Klean® 2010 All Surface Cleaner®

PREPARATION

Before use, test all substrates not intended to be treated with 2010 All Surface Cleaner®. If testing indicates adverse effects, the substrate must be protected before full scale application.

Best practices are to protect people, vehicles, property, plants and all surfaces not set for cleaning from the product, splash, rinse, residue, fumes and wind drift. Rinse non target materials with large quantities of water. Grass and plantings may be protected with sprinklers.

Divert pedestrian and auto traffic if necessary. Best practices are to clean when traffic is at a minimum.

Recommended for these substrates. Always test. Coverage is in sq.ft./m. per gallon of concentrate.			
Substrate	Type	Use?	Coverage
Architectural Concrete Block	Burnished	yes	50–150 sq.ft. 5–14 sq.m.
	Smooth	yes	
	Split-faced	yes	
	Ribbed	yes	
Concrete	Brick	yes	50–150 sq.ft. 5–14 sq.m.
	Tile	yes	
	Precast Panels	yes	
	Pavers	yes	
	Cast-in-place	yes	
Fired Clay	Brick	yes	150–500 sq.ft. 14–46 sq.m.
	Tile	yes	
	Terra Cotta	yes	
	Pavers	yes	
Marble, Travertine, Limestone	Polished	yes	500–1000 sq.ft. 46–93 sq.m.
	Unpolished	yes	150–500 sq.ft. 14–46 sq.m.
Granite	Polished	yes	500–1000 sq.ft. 46–93 sq.m.
	Unpolished	yes	150–500 sq.ft. 14–46 sq.m.
Sandstone	Unpolished	yes	150–500 sq.ft. 14–46 sq.m.
Slate	Unpolished	yes	150–500 sq.ft. 14–46 sq.m.
Always test to ensure desired results. Coverage estimates depend on surface texture and porosity.			

Surface and Air Temperatures

Best air and surface temperatures for cleaning are 50°F (10°C) or above. Cleaning when temperatures are below freezing or will be overnight may harm masonry. If freezing conditions exist before application, let masonry thaw.

Equipment

Apply with low-pressure sprayer, brush or heavy nap roller. Scrub heavily soiled surfaces with a nonabrasive brush or synthetic scrubbing pad.

Rinse with enough water and pressure to flush spent cleaner and dissolved soiling from the masonry surface and surface pores without damage. Masonry-washing equipment generating 400–1000 psi with a water flow rate of 6–8 gpm is the best water/pressure combination for rinsing porous masonry. Use a 15–45° fan spray tip. Heated water (150–180°F; 65–82°C) may improve cleaning efficiency.

Use adjustable equipment for reducing water flow rates and rinsing pressure for sensitive surfaces. Rinsing pressures greater than 1000 psi and fan spray tips smaller than 15° may permanently damage sensitive masonry. Water flow rates less than 6 gpm may reduce cleaning productivity and contribute to uneven cleaning results.

Storage and Handling

Store in a cool, dry place. Always seal container after dispensing. Do not alter or mix with other chemicals. Published shelf life assumes upright storage of factory-sealed containers in a dry place. Maintain temperature of 45–100°F (7–38°C). If product freezes, allow to thaw and mix well. Do not double stack pallets. Dispose of in accordance with local, state and federal regulations.

APPLICATION

Read “Preparation” and the Safety Data Sheet before use.

ALWAYS TEST a small area of each surface to confirm suitability, coverage rate and desired results before beginning overall application. Test each type of masonry and each type of stain. Test with the same equipment, recommended surface preparation and application procedures planned for general application. Let surface dry 3-7 days before inspection and approval. Make the test panel available for comparison throughout the cleaning project.

Product Data Sheet

Enviro Klean® 2010 All Surface Cleaner®

Dilution & Mixing

When removing heavy soiling, use in concentrate.

When used as a light-duty cleaner, dilute up to 1 part cleaner to 10 parts clean water.

Application Instructions

1. Working from the bottom to the top, prewet the surface with clean water.
2. Apply the appropriately diluted solution to the masonry surface using a brush or low-pressure spray.
3. Let the cleaner stay on the surface 1–10 minutes, based on testing. Gently scrub heavily soiled areas.
NOTE: Do not let EK 2010 dry on the surface. If drying occurs, lightly wet surfaces with fresh water and reapply the cleaner in a gentle scrubbing manner.
4. Working from the bottom to the top, rinse the surface thoroughly with clean water.
5. Repeat steps 1 through 4 if necessary.

Cleanup

Clean tools and equipment using fresh water.

WARRANTY

The information and recommendations made are based on our own research and the research of others, and are believed to be accurate. However, no guarantee of their accuracy is made because we cannot cover every possible application of our products, nor anticipate every variation encountered in masonry surfaces, job conditions and methods used. The purchasers shall make their own tests to determine the suitability of such products for a particular purpose.

PROSOCO, Inc. warrants this product to be free from defects. **Where permitted by law, PROSOCO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose.** The purchaser shall be responsible to make his own tests to determine the suitability of this product for his particular purpose. PROSOCO's liability shall be limited in all events to supplying sufficient product to re-treat the specific areas to which defective product has been applied. Acceptance and use of this product absolves PROSOCO from any other liability, from whatever source, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be modified or extended by representatives of PROSOCO, its distributors or dealers.

CUSTOMER CARE

Factory personnel are available for product, environment and job-safety assistance with no obligation. Call 800-255-4255 and ask for Customer Care – technical support.

Factory-trained representatives are established in principal cities throughout the continental United States. Call Customer Care at 800-255-4255, or visit our website at prosoco.com, for the name of the PROSOCO representative in your area.



PROSOCO®

Enviro Klean®

NEXT GENERATION CLEANERS

Klean 'N Release Cleaner

Enviro Klean® Klean 'N Release is a fragrance-free, all-purpose cleaner and degreaser for use on soiled stone, tile, masonry, EIFS, stucco and metal panels. It is safe enough for use on historic preservation and restoration projects yet strong enough for new construction and in food-processing facilities. Easy-to-use Klean 'N Release is dilutable with up to 10 parts water to offer an economical and effective concentrate solution.

Klean 'N Release can also be used on windows, bathroom tub and tile, counter tops and more.

Klean 'N Release is a US EPA Safer Choice certified cleaner that meets the Safer Choice direct release criteria. Formulated to be safer for workers and the environment by using readily biodegradable ingredients, Klean 'N Release contains no phosphates or hazardous solvents. The solution also offers more positive environmental and human health characteristics than conventional cleaning formulations. Klean 'N Release was intentionally designed to be safer for use around people, plants, lawns, pets or wildlife.



ADVANTAGES

- **US EPA Safer Choice certified cleaner. Meets Safer Choice direct release criteria.**
- **Meets the US EPA's Safer Choice criteria for outdoor use.**
- Cleans and degreases light-to-heavily soiled stone, tile, masonry, EIFS, stucco and much more.
- Dilutable for jobs around the home.
- Appropriate for use in food processing facilities.
- Replaces a host of individual cleaning agents.
- Contains no phosphates, hazardous solvents, or environmentally harmful surfactants.
- Fragrance free. Colorant free.
- Flexible dilution with up to 10 parts water.
- Ideal for unpolished natural stone – from limestone to granite.
- Works on an enormous variety of surfaces.
- Effective cleaner for windows, bathroom tub and tile, counter tops and more.
- Easy-to-use and water-rinsable.

SAFETY INFORMATION

Always read full label and SDS for precautionary instructions before use. Use appropriate safety equipment and job-site site controls during application and handling.

24-Hour Emergency Information:
INFOTRAC at 800-535-5053

REGULATORY COMPLIANCE

VOC Compliance

Enviro Klean® Klean 'N Release Cleaner is compliant with all national, state, district, consumer and institutional product VOC regulations.



Nonfood Compounds
Program Listed A1 and A4
Registration #159235

Product Data Sheet

Enviro Klean® Klean 'N Release Cleaner

TYPICAL TECHNICAL DATA

FORM	Clear liquid, mild odor
SPECIFIC GRAVITY	1.05
pH	10.90
WT/GAL	8.70 lbs
ACTIVE CONTENT	not applicable
TOTAL SOLIDS	not applicable
VOC CONTENT	0
FLASH POINT	>212° F (>100° C) ASTM D3278
FREEZE POINT	32° F (0° C)
SHELF LIFE	2 years in tightly sealed, unopened container

PREPARATION

Before use, test all substrates not intended to be cleaned with Klean 'N Release. If testing indicates adverse effects, the substrate must be protected before full scale application. Best practices are to protect people, vehicles, property, metal, painted surfaces, plants and other non-target materials from product, splash, residue, wind drift and fumes.

Surface and Air Temperatures

Best air and surface temperatures for cleaning are 50° F (10° C) or above. Cleaning when temperatures are below freezing or will be overnight may harm masonry. If freezing conditions exist before application, allow masonry to thaw before application.

Equipment

Apply with low-pressure sprayer, brush or heavy nap roller. Scrub heavily soiled surfaces with a nonabrasive brush or synthetic scrubbing pad.

Rinse with enough water and pressure to flush spent cleaner and dissolved soiling from the masonry surface and surface pores without damage. Masonry-washing equipment generating 400–1000 psi with a water flow rate of 6–8 gpm is the best water/pressure combination for rinsing porous masonry. Use a 15–45° fan spray tip. Heated water (150–180°F; 65–82°C) may improve cleaning efficiency.

Use adjustable equipment for reducing water flow rates and rinsing pressure for sensitive surfaces. Rinsing pressures greater than 1000 psi and fan spray tips smaller than 15° may permanently damage sensitive masonry. Water flow rates less than 6 gpm may reduce cleaning productivity and contribute to uneven cleaning results.

Storage and Handling

Store in a cool, dry place. Always seal container after dispensing. Do not alter or mix with other chemicals. Published shelf life assumes upright storage of factory-sealed containers in a dry place. Maintain temperature of 45–100°F (7–38°C). If product freezes, allow to thaw and mix well. Do not double stack pallets. For unused material, dispose of in accordance with local, state and federal regulations.

APPLICATION

Read “Preparation” and the Safety Data Sheet before use. **ALWAYS TEST** a small area of each surface to confirm suitability, coverage rate and desired results before beginning overall application. Test with the same equipment, recommended surface preparation and application procedures planned for general application. Let surface dry thoroughly before inspection.

Dilution & Mixing

Do not alter or use for purposes other than specified. Dilute with up to 10 parts fresh water. Use in concentrate to remove heavy soiling. Always test to final dilution producing desired cleaning results.

Application Instructions

- Working from the bottom to the top, prewet the surface with clean water.
- Apply the cleaner to the surface using a brush or low-pressure spray.
- Let the cleaner dwell on the surface 1–10 minutes, based on testing. Gently scrub heavily soiled areas. **NOTE:** Do not let the cleaner dry on the surface. If drying occurs, lightly wet surfaces with fresh water and reapply in a gentle scrubbing manner.
- Working from the bottom to the top, always rinse the surface thoroughly with clean, fresh water. Rinsing is required in food processing areas.
- Repeat steps 1 through 4 if necessary.

Cleanup

Clean tools and equipment with fresh water.

Product Data Sheet

Enviro Klean® Klean 'N Release Cleaner

WARRANTY

The information and recommendations made are based on our own research and the research of others, and are believed to be accurate. However, no guarantee of their accuracy is made because we cannot cover every possible application of our products, nor anticipate every variation encountered in masonry surfaces, job conditions and methods used. The purchasers shall make their own tests to determine the suitability of such products for a particular purpose.

PROSOCO, Inc. warrants this product to be free from defects. **Where permitted by law, PROSOCO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose.** The purchaser shall be responsible to make his own tests to determine the suitability of this product for his particular purpose. PROSOCO's liability shall be limited in all events to supplying sufficient product to re-treat the specific areas to which defective product has been applied. Acceptance and use of this product absolves PROSOCO from any other liability, from whatever source, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability. This warranty may not be modified or extended by representatives of PROSOCO, its distributors or dealers.

CUSTOMER CARE

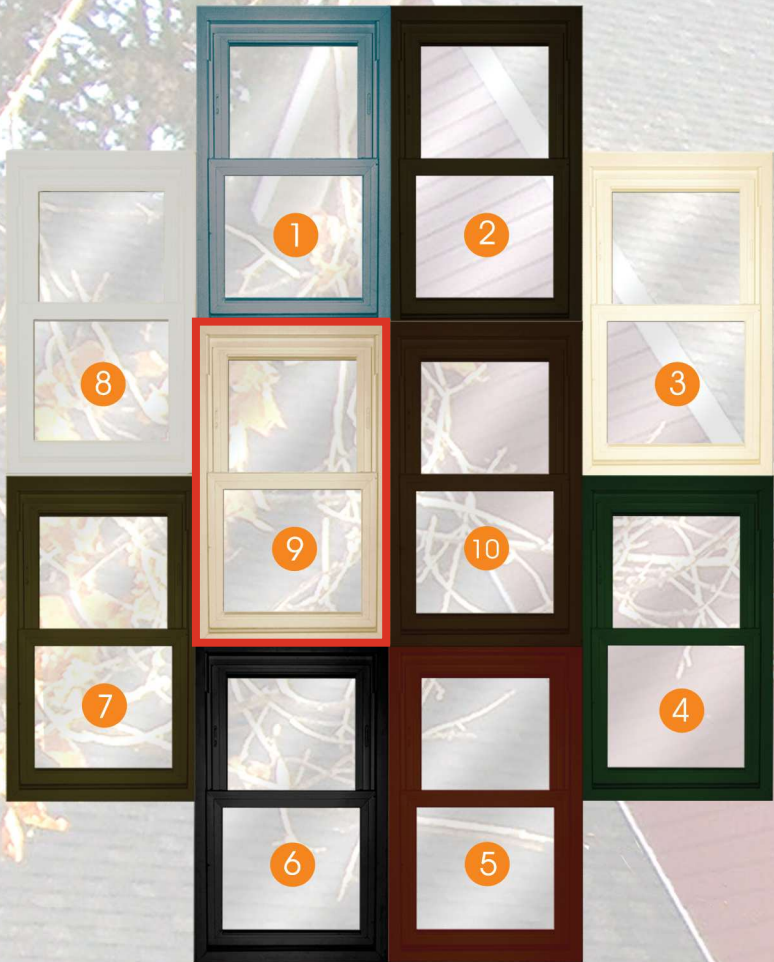
Factory personnel are available for product, environment and job-safety assistance with no obligation. Call 800-255-4255 and ask for Customer Care – technical support.

Factory-trained representatives are established in principal cities throughout the continental United States. Call Customer Care at 800-255-4255, or visit our website at prosoco.com, for the name of the PROSOCO representative in your area.

Have you ever imagined windows can come in so many styles and colors? Here at Crystal, the hardest part is choosing the right style windows made in your favorite color. Crystal Series 200 vinyl windows can be painted with 10 optional two-tone custom colors:

- 1: Blue
- 2: Dark Brown
- 3: Beige
- 4: Dark Green
- 5: Dark Red
- 6: Black
- 7: Earthtone
- 8: Grey
- 9: Clay
- 10: Medium Brown

*Color for illustration purpose only. Actual color may vary slightly.



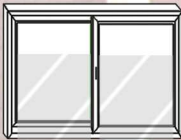
The **VERSATILE** Crystal Series 200 Fully Welded Vinyl Line is also available in a full collection of styles, sharing many similar features.



CVD-200
Double Hung



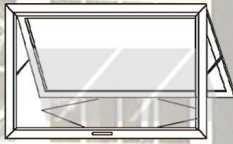
CVP-211/215
Fixed / Picture



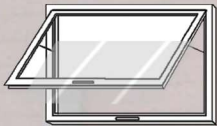
CVS-220
2 Lite or 3 Lite Slider



CVC-235
Casement



CVA-245
Awning



CVH-255
Hopper



CAP-280
Special Shapes



Bays & Bows



CVG-270
Garden Bay

SCAN ME



Crystal Window & Door Systems, Ltd.

NYC, NY (HQ) 31-10 Whitestone Expressway, Flushing, NY 11354 | Tel: 800.472.9988/718.961.7300 | Fax: 718.460.4594
SCRANTON, PA 204 Franklin Valley Rd, Dalton, PA 18414 | Tel: 570.276.8000 | Fax: 570.563.5313
CLEVELAND, OH 29299 Clemens Rd. 1-B, Westlake, OH 44145 | Tel: 440.871.8694 | Fax: 440.871.8690
ST. LOUIS, MO 300 Axminster Dr., Fenton, MO 63026 | Tel: 636.305.7880 | Fax: 636.305.7881
CHICAGO, IL 1300 W. 35th st. Chicago, IL 60609 | Tel: 773.376.6688/888.280.3288 | Fax: 773.376.6868
RIVERSIDE, CA 1850 Atlanta Ave, Riverside, CA 92507 | Tel: 951.779.9300 Fax: 951.779.6300
DALLAS, TX 454 W. Mockingbird Ln., Dallas, TX 75247 | Tel: 469.248.3012 | Fax: 469.248.2978
TORONTO, ON 30 West Pearce Street, Richmond Hill, ON, L4B 1E3 | Tel: 905.889.9883 | Fax: 905.889.5891



Crystal Windows Affiliations:



Follow us on:     

MANUFACTURER RESERVES THE RIGHT TO CHANGE PRODUCT DESIGNS, SPECIFICATIONS, DETAILS AND PRICING AT ANY TIME WITHOUT PRIOR NOTIFICATION.
© 2024-2025 Crystal Window & Door Systems, Ltd. All Rights Reserved. Printed in USA.

CRYSTAL SERIES 200

FULLY WELDED VINYL WINDOWS FOR REPLACEMENT



Crystal
WINDOW & DOOR

Crafted with Passion, Built to Perform™

CRYSTAL SERIES 200

FULLY-WELDED VINYL WINDOWS

AAMA Rated R-PG50

3¼" Fusion-welded frame has a wall thickness of 0.072". Providing excellent structural integrity.

Ergonomic-design night latches combine ease-of-use with peace of mind.

High-profile tilt latches for easy operation when tilting sashes into the house for cleaning.

Cam-Type compression sash lock for airtight seal and maximum weather protection.

This high-performance "hospital sill" gives the highest testing results for air & water protection while allowing draft-free ventilation.

Triple full length weather-stripping seals at both head and sill significantly minimizes air infiltration.

The in-between glass grids for beauty and no maintenance. (optional feature. Many styles and patterns available.)

Window sash operation is made easy with durable constant-force balances.

Durable extruded half-screen comes standard.

Optional custom two-tone finish matches any facade (available in 10 exterior colors)

TRADITIONAL CRAFTSMANSHIP MEETS TODAY'S TECHNOLOGY.

A perfect balance of traditional design and quality is what makes the 200 Series the premier product in the industry. Traditional design appointments from the artistic beveled exterior to the shadow line sash face brings back the feeling of a traditional American home design.

Beveled exterior frame adds elegance to the exterior of your home.

Heavy Multi-Chamber construction maximizes strength, durability and insulating performance.

7/8" Insulated glass for maximum energy savings

Standard Vitro ULTRA Intercept Spacer optimizes thermal performance 365 days a year.

Dual-wall, full-length, extra-deep lift rail for easy operation.

CVD200 THERMAL PERFORMANCE	Clear	0.46	0.59	GOOD
	Low-E (Soft Coat)	0.29	0.36	BETTER
	Low-E (TC™ Soft Coat)	0.28	0.28	BEST
	Low-E Triple Glazed IGU (Dual TC™ Soft Coat)	0.22	0.22	EXTREME
	Low-E Triple Glazed IGU (Ultimate TC™ Soft Coat)	0.17	0.18	ULTIMATE

LEGEND:

U-Value SHGC

R5 QUALIFIED



ENERGY SAVING TIP:
Upgrade Crystal Series 200 Double Hung Windows with Triple Glazed with dual Low-E coated IGU* to achieve R5-qualified performance.
*IGU = Insulated Glass Unit

Once you are able to refocus on performance criteria the technological enhancements make this one of the highest performing windows in the industry. In addition, we have added the strongest warranty in the industry to give you the assurance that you have purchased the very best window for the money.

CRYSTAL SERIES 200

FULLY-WELDED VINYL WINDOWS

AAMA Rated R-PG50

3¼" Fusion-welded frame has a wall thickness of 0.072". Providing excellent structural integrity.

Ergonomic-design night latches combine ease-of-use with peace of mind.

High-profile tilt latches for easy operation when tilting sashes into the house for cleaning.

Cam-Type compression sash lock for airtight seal and maximum weather protection.

This high-performance "hospital sill" gives the highest testing results for air & water protection while allowing draft-free ventilation.

Triple full length weather-stripping seals at both head and sill significantly minimizes air infiltration.

The in-between glass grids for beauty and no maintenance. (optional feature. Many styles and patterns available.)

Window sash operation is made easy with durable constant-force balances.

Durable extruded half-screen comes standard.

Optional custom two-tone finish matches any facade (available in 10 exterior colors)

TRADITIONAL CRAFTSMANSHIP MEETS TODAY'S TECHNOLOGY.

A perfect balance of traditional design and quality is what makes the 200 Series the premier product in the industry. Traditional design appointments from the artistic beveled exterior to the shadow line sash face brings back the feeling of a traditional American home design.

Beveled exterior frame adds elegance to the exterior of your home.

Heavy Multi-Chamber construction maximizes strength, durability and insulating performance.

7/8" Insulated glass for maximum energy savings

Standard Vitro ULTRA Intercept Spacer optimizes thermal performance 365 days a year.

Dual-wall, full-length, extra-deep lift rail for easy operation.

CVD200 THERMAL PERFORMANCE	Clear	0.46	0.59	GOOD
	Low-E (Soft Coat)	0.29	0.36	BETTER
	Low-E (TC™ Soft Coat)	0.28	0.28	BEST
	Low-E Triple Glazed IGU (Dual TC™ Soft Coat)	0.22	0.22	EXTREME
	Low-E Triple Glazed IGU (Ultimate TC™ Soft Coat)	0.17	0.18	ULTIMATE

LEGEND:

U-Value SHGC

R5 QUALIFIED



ENERGY SAVING TIP:
Upgrade Crystal Series 200 Double Hung Windows with Triple Glazed with dual Low-E coated IGU* to achieve R5-qualified performance.
*IGU = Insulated Glass Unit

Once you are able to refocus on performance criteria the technological enhancements make this one of the highest performing windows in the industry. In addition, we have added the strongest warranty in the industry to give you the assurance that you have purchased the very best window for the money.



Steel Security Replacement Doors

[HomeResources](#) Steel Security Replacement Doors

Steel Security Replacement Doors

Can anyone provide an entry door system that is easy to install, offers increased security and is beautiful at the same time? Well, MMI DOOR has done just that. Our unique MPact Replacement Door System is designed for:

- Convenience - Fits inside your existing door frame and can be sized to fit your opening in most cases.
- Security - Surrounded by an 18 gauge steel frame system, our MPact unit provides ultimate security.
- Curb Appeal - Available in our most popular steel door designs, choose from 15 decorative glass collections, internal muntins, blinds, shades, prefinishing services and more!

Whether it be convenience, security, curb appeal or all three—the MPact Replacement Door System may be the right choice for you.

A Beautiful New Door

A new steel entry door can add substantial curb appeal to your home without costing a fortune. Steel exterior doors are durable and manufactured to prevent water absorption, resist rust and come factory primed for easy finishing.



The image shows a side-by-side comparison of a door replacement. On the left, labeled 'Before....', is an old, weathered, light-colored wooden door with peeling paint and a brass doorknob. On the right, labeled 'After', is a new, white, six-panel steel door with a gold-colored doorknob and a small transom window above the handle. The door is set in a white frame.

Key Benefits:
Quick & Easy installation; installs in half of the time as a new construction unit

Other Benefits Include:

- Convenience – fits inside your existing door frame
- Prehung on a commercial, 18 gauge steel frame
- All steel door – 24 gauge face and 22 gauge reinforced edges for additional strength
- 14 Pre-set security installation with fastening points secure the opening – 6 at the critical lockset impact area
- All doors are pre-prepped for entry and deadbolt locks
- Weatherstrip system – 5 fin door sweep, adjustable sill, weatherstrip stop and corner seals complete the entire package
- 2/6, 2/8, 2/10 & 3/0 – 6/8 and 7/0 sizes are available. Sizes may vary by door style

Please Note: 2/8 replacement doors with decorative 1/2 & full lites and 2/6 replacement doors with clear 1/2 & full lites will require a glass offset of 1/4" from lock prep.

Before.... After
Actual MMI DOOR Customer's Door

Prefinishing is Available



Same Color Both Sides



Different Color Both Sides



Same Color Storm Door and Entry Door (10 matching colors)

Black storm door

MMI DOOR BOLD COLORS



MMI DOOR STANDARD COLORS

☐ Matching Storm Door Color Available

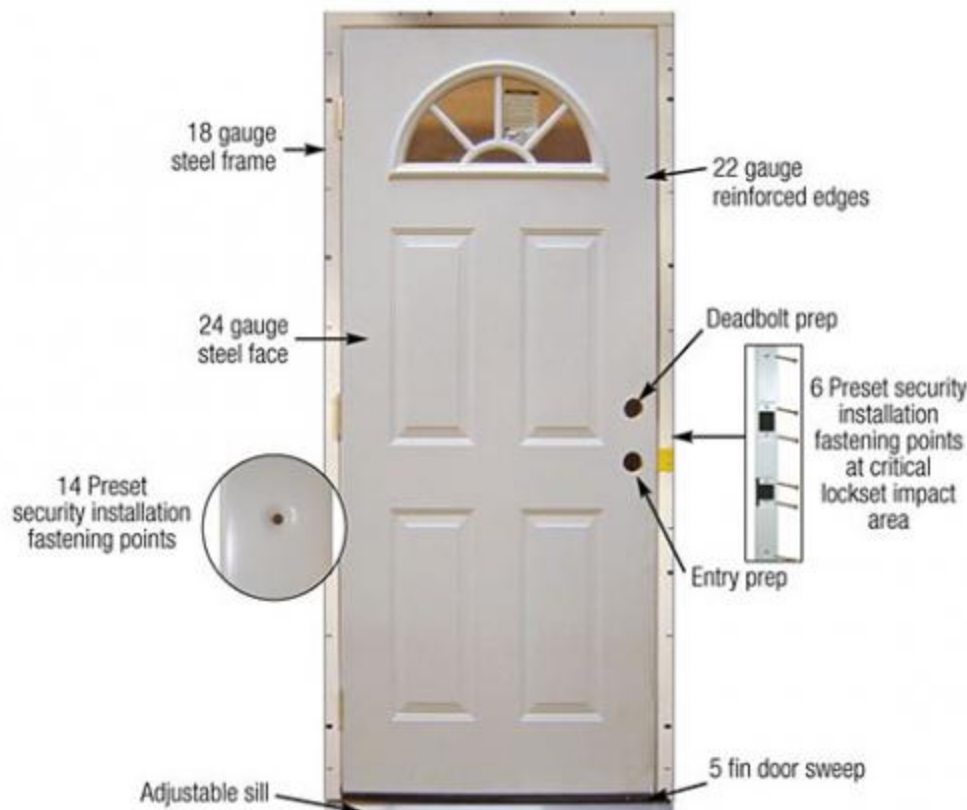


White main door



Some of our Steel Replacement Doors do qualify for the Energy Star® Program. Please refer to www.mmidoor.com for a complete list of our qualifying products. (Qualification based on 2015 Energy Star® Program Criteria and can change)

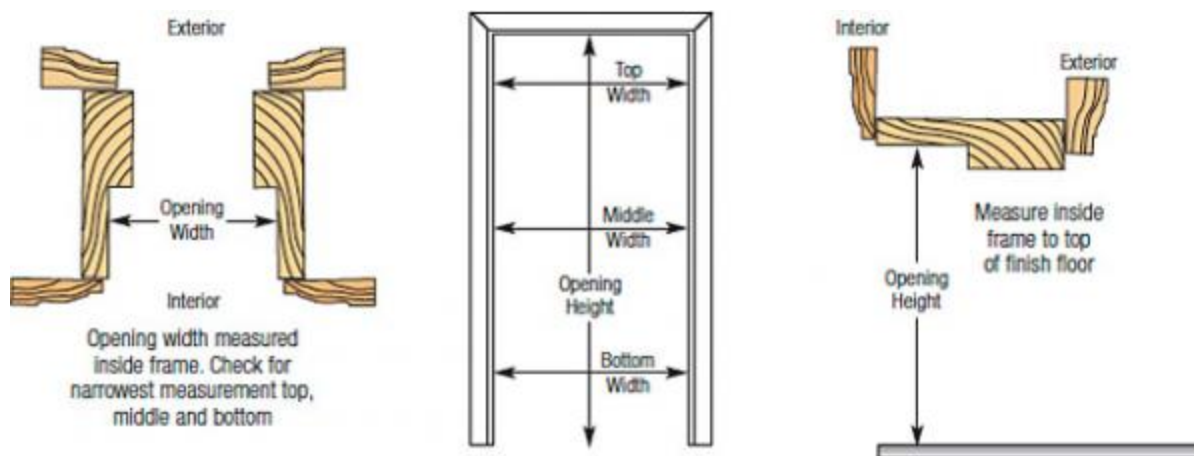
Anatomy of a Replacement Door



How To Install



How to Measure



Opening Chart

SIZE	FITS THESE EXISTING OPENINGS			
	WIDTHS		HEIGHTS	
(Nominal)	Minimum	Maximum	Minimum	Maximum
2'6" x 6'8"	29-3/4"	30-1/2"	80"	80-1/2"
2'8" x 6'8"	31-3/4"	32-1/2"	80"	80-1/2"
3'0" x 6'8"	35-3/4"	36-1/2"	80"	80-1/2"
3'0" x 7'0"	35-3/4"	36-1/2"	84"	84-1/2"

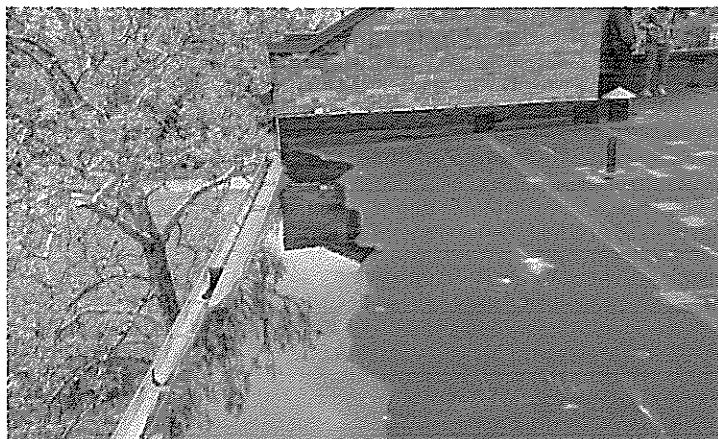
- [Overview](#)
- [Anatomy of a Door](#)
- [Before You Buy a Door](#)
- [Care & Maintenance](#)
- [Glass Options](#)
- [Door Hardware & Accessories](#)
- [Door Materials](#)
- [Exterior Doors](#)
 - [Fiberglass Doors](#)
 - [Fiberglass Graining Options](#)
 - [Steel Doors](#)
 - [Steel Replacement Doors](#)
- [Frame Types](#)
- [Glossary of Terms](#)
- [Green Initiatives & Testing](#)
- [Handing and Swing](#)
- [Glass Caming](#)
- [How To Install a Door](#)
- [How To Measure](#)
- [How To Video Library](#)
- [Interior Doors](#)
- [Marketing Material](#)
- [MMI Mobile App](#)
- [Paint and Stain Information](#)
- [Patio, French & Double Doors](#)
- [Pre Hanging Information](#)
- [Product Warranties](#)
- [Selecting a Door Configuration](#)

Phone: [\(833\) 344-0031](tel:8333440031) Email: info@mmidoor.com

Hours: **Mon-Fri 7:00am-5:00pm (EST)**



BOSTON PLACE APTS. DETROIT MI.



OVERALL VIEW SLOPES TO GUTTER



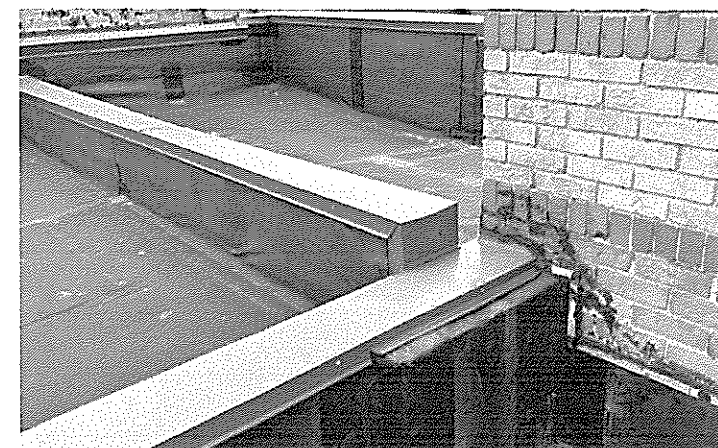
STEEP WALL IN FRONT WILL BE COVERED



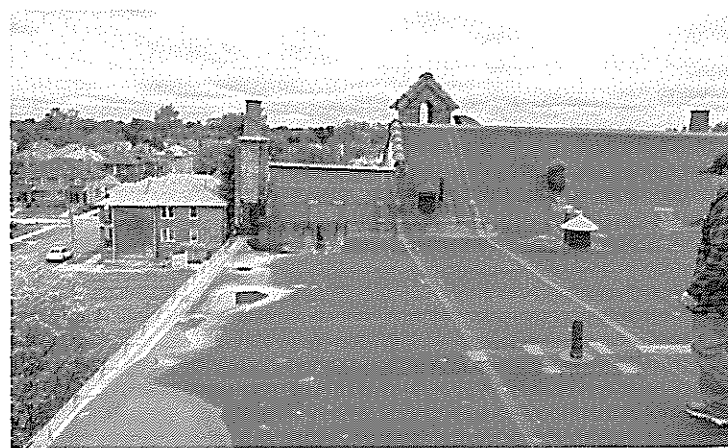
OVERALL VIEW SLOPES TO GUTTER



OVERALL VIEW SLOPES TO GUTTER



WALLS TO BE ENCAPSULATED



OVERALL VIEW



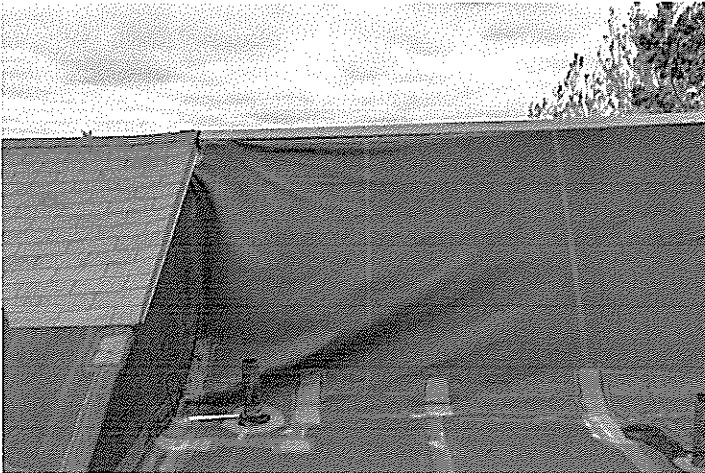
COMMERCIAL AND INDUSTRIAL ROOFING
32402 W. Eight Mile Rd. Farmington Hills, MI. 48336
PH: 248-474-2767 FX: 248-474-4199
www.roofmgmtco.com



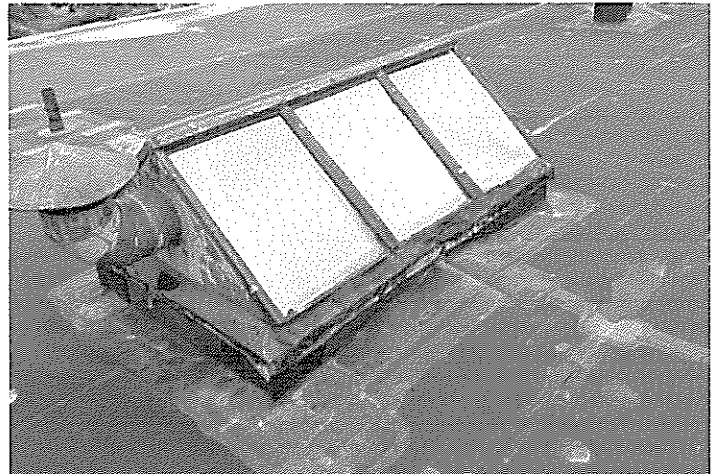
OVERALL VIEW



MEMBRANE STARTING TO PULL OUT FROM METAL



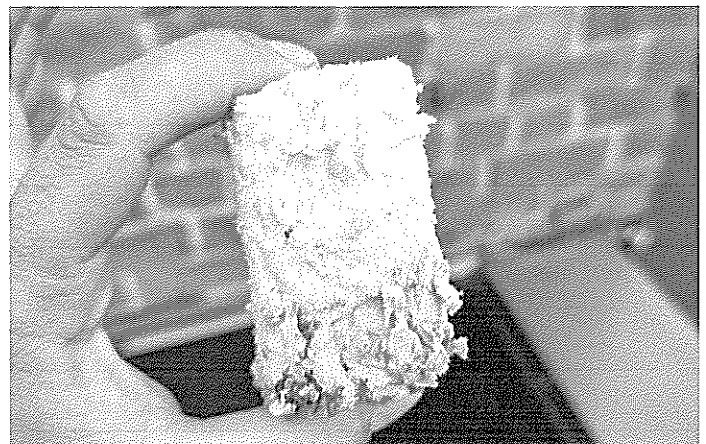
EPDM PULLING AWAY FROM WALLS



ENCAPSULATE SKY LIGHTS



BROKEN PIPE NEEDS ATTENTION BY OTEHRS



CORE REVEALED 3" ISO INSULATION DRY



COMMERCIAL AND INDUSTRIAL ROOFING

32402 W. Eight Mile Rd. Farmington Hills, MI. 48336

PH: 248-474-2767 FX: 248-474-4199

www.roofmgmtco.com

September 23, 2025

This letter is to affirm that the underlining roof supporting structure of the building located at 2725 W. Boston Blvd. in Detroit, is in sound condition and is not being modified and part of the permit.

Frank Beck 9/23/2025

Frank Beck
Director of Operations
Roof Management

It's not just a roof, it's our reputation!

WEST BOSTON APTS. 2725 W. BOSTON BLVD. DETROIT, MI. 48206

ROOF IS SLOPED AND ALL DRAINS TO GUTTER EDGES

→ DRAINAGE DIRECTION TO GUTTER EDGE



2725 W BOSTON APARTMENTS
DETROIT, MICHIGAN





MECHANICALLY FASTENED SYSTEMS

TABLE OF CONTENTS

SECTION 1 - - - GENERAL	2
Introduction	2
Requirements	2
Tools	2
Membrane Description	3
Applicability	3
Drainage / Slope	3
Weather Considerations	3
Delivery	3
Handling	3
Storage	3
Substrate Separation	4
Chemical Resistance	4
Paint Application	4
Vapor Barriers	4
SECTION 2 - - - QUALITY ASSURANCE	5
Pre-Job Inspection	5
Core Cuts	5
Pull Tests	5
Fastener Selection and Deck Types	5
Plate Selection	5
Fastener Selection Based on Deck Type	6
Fastener Spacing Tables	7
SECTION 3 - - - IMPLEMENTATION	8
Roof Preparation	8
Recover – Built-Up Roofs (BUR)	8
Recover – Single-Ply Roofs	8
Recover – Metal Roofs Recover/Retrofit	8
New Construction	9
Installation	9
Wood Nailer	9
Insulation Selection and Installation	10
Perimeter Membrane Installation	10
Membrane Installation	10
Hot-Air Welding	11
Penetrations	11
Flashings	11
Pitch Pans	11
Two-Way Air Vents	11
Roof Drains and Scuppers	11
Expansion Joints	12
Walkway Pads	12
Cautions and Warnings	12

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS**SECTION 1 - - - GENERAL****INTRODUCTION**

The following is the information required to install the Duro-Last roofing system. Each installation should be in compliance with the detail drawings, instructions, material descriptions, and other information stated herein.

REQUIREMENTS

1. The Duro-Last roofing system must be installed by an authorized Duro-Last contractor.
2. A Duro-Last Technical Representative must inspect the Duro-Last roofing system for compliance with the Duro-Last specifications before a commercial/industrial warranty is issued. Note: Duro-Last does not perform destructive testing unless visual inspection necessitates a need for further investigation.
3. All materials used in the installation of the Duro-Last roofing system must be products of Duro-Last, Inc. or accepted products as defined and described in the specification. Other materials must be accepted in writing by the Duro-Last Engineering Services department prior to being used in the Duro-Last roofing system.
4. The Duro-Last contractor is responsible for following all applicable building, plumbing, and electrical codes.
5. Buildings 40 ft. or taller and/or located within high wind zones (greater than 110 mph) or special wind regions, the following applies:
 - a. The Duro-Last Engineering Services Department should be involved in determining the fastening requirements. Typically, the ASCE 7 Specification will be used to determine the fastening requirements. When appropriate, specifications set forth by entities such as FM Global, SPRI or State/Local Agencies will be utilized.
 - b. Fastening tab spacing may not exceed 60 inches on center unless approved, in writing, by the Duro-Last Engineering Services Department.
6. It is the contractor's responsibility to verify the accuracy of information provided to Duro-Last, including but not limited to pull test results, building height, and roof dimensions. Measurements used during the quotation phase of a project must be checked for accuracy by the installing contractor.

TOOLS

The authorized Duro-Last contractor should have the following tools, which are necessary for the efficient and proper installation of the Duro-Last roofing system.

• Safety Equipment (such as fall protection)	• Equipment necessary to raise materials to the rooftop
• Hand welders (hot-air) with a spare heating element (Optional: Automatic welder)	• Silicone hand roller
• Extension cords - cord length of 100 ft., #12/3 wire w/ground	• Ground fault interrupter
• Variable speed power screw driver with reverse	• P-3 screwdriver tips for screws
• Electric hammer drill w/depth gauge	• R-3 square drive tips for concrete screws
• Metal snips, hacksaw, keyhole saw, hammers, scissors, utility knives with retractable blades	• Measuring tapes (100 ft. and 25 ft.), chalk line, markers, lumber crayon
• 2-inch flat chisels, pry bar	• Vise clamps, nail aprons, caulk gun, screw drivers
• Tack claw	• Ladders
• Tarps	• Gripull
• Core cutter	• Pull tester
• Detergent-based cleaning fluid and rags	• Panduit bander

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS**MEMBRANE DESCRIPTION**

- A. The Duro-Last membrane is a polyvinylchloride polymer blend, which is reinforced with a high-strength weft-inserted polyester scrim that has a thread pattern of 18 x 14 threads per square inch. Refer to the Product Data Sheets for a listing of all of the test results and physical properties of the membrane.
1. The 40-mil thick membrane has a system weight of approximately 0.25 lb/ft². The prefabricated roof cover is supplied in sections that are either folded or rolled. Individual sections may be as large as 2,500 ft², with no single dimension exceeding 100 ft. Deck sheets can be fabricated up to 3,000 ft² when using 10-ft. laps, 30'-6" wide with a full reverse, not to exceed 100 ft. long.
 2. The 50-mil thick membrane has a system weight of approximately 0.32 lb/ft². The prefabricated roof cover is supplied in sections that are either folded or rolled. Individual sections may be as large as 2,000 ft², with no single dimension exceeding 80 ft. Deck sheets can be fabricated up to 2,500 ft² when using 10-ft. laps, 30'-6" wide with a full reverse, not to exceed 80 ft. long.
 3. The 60-mil thick membrane has a system weight of approximately 0.39 lb/ft². The prefabricated roof cover is supplied in sections that are either folded or rolled. Individual sections may be as large as 1,500 ft², with no single dimension exceeding 60 ft.

APPLICABILITY

The Duro-Last roofing system consists of the Duro-Last membrane, fasteners, prefabricated corners, parapet flashings, stack flashings, curb flashings, two-way vents, and other related Duro-Last approved products. The Duro-Last roofing system consists of products manufactured by Duro-Last, Inc., or accepted products as defined and described in the specifications. Alternate materials must be pre-approved in writing by the Duro-Last Engineering Services Department prior to their use with the Duro-Last roofing system.

DRAINAGE/SLOPE

Duro-Last has found no adverse effects on its membrane because of a lack of positive drainage, however, good roofing practices incorporate the use of positive drainage for the safety of the structure. The installing contractor is responsible to make sure roof drainage meets local building code requirements.

WEATHER CONSIDERATIONS

The Duro-Last membrane is designed to perform in all types of weather. The Duro-Last membrane is regularly subjected to DSET, EMMAQUA Exposure and low temperature cracking (ASTM D-2136) testing. Installation of the Duro-Last membrane is limited only by the exposure limitations of the installers. It is Duro-Last's recommendation that installation be performed within the temperature range of -15° to 115° F.

DELIVERY

The Duro-Last roofing system and related materials will be delivered to the location designated by the Duro-Last contractor in the original packaging and with shipping labels intact. Containers will be labeled with manufacturers/supplier's name, product name, and identification. Each shipment should be checked for damages and/or shortages at the time of delivery. The freight agent must note damaged materials and/or shortages on the freight bill. Concealed damage must be reported to the freight agent immediately. Materials damaged in shipping, handling, or storage cannot be used.

HANDLING

Once the Duro-Last roofing system is delivered, the contractor and contractor's crew are responsible for all handling and installation of the roofing system. Adequate personnel and equipment should be available to safely lift and place the Duro-Last roofing system onto the rooftop. Folded or rolled prefabricated sections of membrane must be placed on the roof near load-bearing members, and 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. Keep combustible materials away from heat, sparks, and open flames. Follow precautions outlined on the containers or supplied by the material manufacturer.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS**SUBSTRATE SEPARATION**

The Duro-Last membrane is defect-free when it leaves the factory. Certain substrates are not compatible with the Duro-Last membrane and may cause premature failure of the membrane. Over the substrates listed below, install an approved slip sheet, fan fold board or cover board prior to the installation of the Duro-Last membrane.

Acrylic Coatings	Extruded Polystyrene	Modified Bitumen	Shingles
Aluminum Coated Asphalt	Granulated Cap Sheet	Old Duro-Last Roofs	TPO (Thermoplastic Polyolefin)
Coated or Smooth Asphalt	Hypalon (CSPE)	Polyurethane	Sprayed Urethane Foam
Expanded Polystyrene	Mineral Surfaced Cap	Coal Tar Pitch	PVC/CPA Membranes

The Duro-Last membrane is compatible with the following substrates, and no separation is required.

CPE Roofing	GP DensDeck™ and DensDeck™ Primed	Glass Fiber Board
Cellular Glass Boards	Polyisocyanurate Insulation Boards	
EPDM (clean)	Lightweight Structural Concrete Decks (Smooth)	Wood Decks
Gypsum	Smooth Pre-stressed Concrete Decks	

CHEMICAL RESISTANCE

Duro-Last membrane is resistant to the chemicals listed below. If any other chemicals are present on a particular roof, please contact the Engineering Services Department.

Acrylic Paint	Linseed Oil	Copper Sulfate	Lard (Animal Fats)
Latex Paint	Masonry Cleaner	Ferric Chloride	Phosphoric Acid
Fertilizer Solution	Muriatic Acid	Fiberglass Mat	Polypropylene
Fruit Juice	Oleic Acid	Furnace Residue	Zinc Chloride
Hydrogen Peroxide	Sodium Hydroxide	Detergent Solution	Bleach

PAINT APPLICATION

The Duro-Last membrane may be painted, although vinyl edging may not be painted. See the Chemical Resistance section for approved paint types for the membrane. If the vinyl edging is painted and causes damage to the edgings, Duro-Last Roofing, Inc. will not be held responsible for repair or replacement under the warranty. Should you have any questions, please contact the Duro-Last Quality Assurance Department.

VAPOR BARRIERS

Duro-Last recommends the use of vapor barriers, however it is the responsibility of the Duro-Last contractor of record to ensure that all applicable specifications, building codes, regulations and ordinances are complied with and followed. A roofing professional, such as a consultant or architect, should be utilized for correct roof system design prior to installing any roof system.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS**SECTION 2 - - - QUALITY ASSURANCE****PRE-JOB INSPECTION**

When recovering an existing roofing system, the authorized Duro-Last contractor is responsible to conduct an inspection of the proposed job site roof conditions to determine the needed fastener type and length, evaluate the moisture content of the existing roofing system, and to note damaged areas to be repaired prior to installation of the Duro-Last roofing system.

CORE CUTS

1. 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.
2. Duro-Last, Inc. does not approve the practice of roofing over existing roofing systems that contain excess moisture. Excess moisture is defined as water observed within a core cut or water squeezed from the core sample taken.
3. Duro-Last's post-installation warranty inspection does not check the moisture content of the substrate.

PULLOUT TESTS

1. Fastener pullout 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 with any questions.
2. It is the responsibility of the Duro-Last contractor to make sure pullout tests are performed on site. The tests can be performed by either the fastener manufacturer or the authorized Duro-Last contractor. The sections of decking where integrity is in question should be the locations for the tests. The pullout tests must be documented on a roof drawing showing the location and pullout value of each test. 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 pullout tests required will be as follows: perform a minimum of 10 tests for up to 50,000 ft² and five additional pull tests for each additional 50,000 ft² or portion thereof, on each project. Areas of low pullout results will require additional pullout tests.
4. It is the responsibility of the Duro-Last contractor to verify pullout values prior to installation.

FASTENER SELECTION AND DECK TYPES

The fasteners used to attach insulation, recover board and Duro-Last membrane must be supplied by Duro-Last, Inc. The following tables summarize the appropriate fasteners to use for different deck types and system components. 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.

PLATE SELECTION

When determining which plates to use and where to use them, refer to this table.

	2-inch Poly-Plate	2.4-inch Cleat Metal Plate	3-inch Square Metal Plate	Insulation Plate
Membrane Fastening				
Fastening Tabs	Yes	Yes	No*	No
Parapet Flashings	Yes	Yes	Yes	No
Base of Walls/Penetrations	Yes	Yes	Yes	No
Insulation Boards	Yes	Yes	Yes	Yes
Cover Boards	Yes	Yes	Yes	No

* Allowed by deviation only on the Duro-Roof system.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

FASTENER SELECTION BASED ON DECK TYPE

When determining which fastener type to use for a specific deck type, refer to this table. Note that pullout tests must be performed on each deck and that fastener spacing must be determined based on the "Fastener Spacing Tables" on the following page. If the minimum pullout values required cannot be achieved contact the Duro-Last Engineering Services Department for assistance.

Deck Type	Fastener Type	Notes
Steel	Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 inch from the top surface of deck.
Wood	Duro-Last HD Screws Duro-Last XHD Screws	Must penetrate a minimum of 1 inch 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 inch from the top surface of deck. Pre-drill a minimum of 1/2 inch deeper than the required depth of the fasteners using a 3/16-inch bit.
Gypsum	Auger Fastener* Liquid Auger Fastener**	Minimum pullout requirements must be met. See "Fastener Spacing Tables", page 7.
		Pre-drill required for auger fasteners. Use a 7/16 – 9/16-inch bit.
		* Must penetrate a minimum of 1-1/2 inches from the top surface of deck. * Factory Mutual designed systems require minimum of 2-inch penetration.
		** Liquid Augers must penetrate a minimum of 2 inches from the top surface of the deck.
Cementitious Wood Fiber (Tectum)	Auger Fastener* Liquid Auger Fastener**	Minimum pullout requirements must be met. See "Fastener Spacing Tables", page 7.
		Do not pre-drill.
		* Must penetrate a minimum of 1-1/2 inches from the top surface of deck. * Factory Mutual designed systems require minimum of 2-inch penetration.
		** Liquid Auger must penetrate a minimum of 2 inches 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	Minimum pullout requirements must be met. See "Fastener Spacing Tables", page 7.
		Pre-drill required. Augers: Use a 7/16 – 9/16-inch bit. Others: Use a 3/16-inch bit.
		* Must penetrate a minimum of 1-1/2 inches from the top surface of deck. * Factory Mutual designed systems require minimum of 2-inch penetration.
		** Liquid Auger must penetrate a minimum of 2 inches from the top surface of the deck.
Walls and Curbs	Fastener Type	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 inch from the top surface. Pre-drill a minimum of 1/2 inch deeper than the required depth of the fasteners using a 3/16-inch bit (1/2-inch for metal anchors).

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

FASTENER SPACING TABLES* – FOR USE WITH ALL DECK TYPES

60 psf System Design Table (Field Area Only)	Fastener Pullout Resistance		Fastener Spacing Along Laps					
			120-inch Lap Spacing		60-inch Lap Spacing		28-inch Lap Spacing	
	lb.	N	in.	mm	in.	mm	in.	mm
	450	2000	9	230	18	457	24	610
	375	1670	6	230	15	380	18	455
	350	1550	6	150	15	380	18	455
	325	1445	6	150	12	305	18	455
	300	1330	6	150	12	305	18	455
	275	1220	N.A.		12	305	18	455
	225	1000	N.A.		9	230	18	455
90 psf System Design Table (Field Area Only)	210	930	N.A.		6	150	18	455
	175	780	N.A.		6	150	15	380
	150	665	N.A.		6	150	15	380
	140	620	N.A.		N.A.		12	305
	Less than 140 (620)		N.A.		N.A.		N.A.	

60 psf System Design Table (Field Area Only)	Fastener Pullout Resistance		Fastener Spacing Along Laps					
			120-inch Lap Spacing		60-inch Lap Spacing		28-inch Lap Spacing	
	lb.	N	in.	mm	in.	mm	in.	mm
	450	2000	6	230	12	305	18	455
	375	1670	N.A.		9	230	18	455
	350	1550	N.A.		6	150	18	455
	325	1445	N.A.		6	150	18	455
	300	1330	N.A.		6	150	15	380
	275	1220	N.A.		6	150	15	380
	225	1000	N.A.		6	150	18	455
90 psf System Design Table (Field Area Only)	210	930	N.A.		N.A.		12	305
	175	780	N.A.		N.A.		9	230
	Less than 175 (780)		N.A.		N.A.		N.A.	

Pullout values greater than 450 lbs can only be used with the Duro-Roof system.

1. For buildings 40 ft. or taller and/or located within high wind zones (greater than 110 mph) or special wind regions:

a. The Duro-Last Engineering Services department should be involved in determining the fastening requirements. The ASCE 7 Specification will be used to determine the fastening requirements. When appropriate, specifications set forth by entities such as FM Global, SPRI or State / Local Agencies will be utilized.

b. Fastening tab spacing may not exceed 60 inches on center unless approved, in writing, by the Duro-Last Engineering Services department.

The tables to the left indicate the membrane fastening within the FIELD AREA only. Membrane attachment on Duro-Last designed roof systems, buildings in special wind regions or those 40 feet or taller, and all Factory Mutual-insured buildings will require special field, perimeter, and corner fastening.

The width of the perimeter area is determined by either the lesser of 40% of the building height at the eaves or 10% of the overall plan width of the building and/or roof area. The perimeter must never be less than 5 feet wide.

Contact the Duro-Last Engineering Services department for additional information.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

SECTION 3 - - IMPLEMENTATION

ROOF PREPARATION

RECOVER – Built-up Roofs (BUR)

- a. If the BUR is gravel surfaced and the pea gravel or crushed stone is 1/4 – 3/8-inch in size, it must be leveled and maintained at 4 lb/ft². A minimum 3/8-inch fan fold recover board, supplied by Duro-Last, approved recover board, or 1 inch thick insulation must be used to overlay the gravel.
- b. If the loose stone on an old BUR is vacuumed or swept, a minimum 3/8-inch fan fold board, supplied by Duro-Last, approved recover board, or 1 inch thick insulation must be used to overlay the existing system. CAUTION: Removing more than the loose gravel may affect the fire rating. Contact the Duro-Last Engineering Services Department for assistance regarding fire rated assemblies.
- c. If the BUR is a smooth or granular surfaced application, and is free of sharp edges and debris, it can be recovered with an approved slip sheet, although Duro-Last fan fold board is recommended.
- d. EPS insulation cannot be used over coal tar pitch or asphalt without a slip sheet between the coal tar pitch and the insulation as well as between the membrane and the insulation. Duro-Last underlayments are approved for direct application over aged coal tar pitch roofs.
- e. When roofing over asphalt or coal tar roofs (including tear-off), an approved separator sheet must be used. Asphalt-based products are incompatible with the Duro-Last roofing membrane. Note: Should the Duro-Last membrane become soiled with roofing asphalt, the affected membrane must be cleaned immediately using approved cleaners and procedures. If the asphalt cannot be properly cleaned from the membrane, the affected membrane must be removed and new membrane installed, or overlay the affected area with an approved slip sheet and new membrane. Extreme caution should be taken if you are doing a tear-off while installing the membrane.

RECOVER – Single-Ply Roofs

- a. The existing single-ply roofing membrane must be cut free from the entire roof perimeter, cut free around all penetrations, and cut in between fastener rows prior to the installation of the Duro-Last membrane. When reroofing after a tear-off, caution should be used to prevent the Duro-Last membrane from contacting incompatible materials. (See "Substrate Separation", page 4)
- b. If the existing system is mechanically fastened, there is often a problem with loose fasteners. Because of this problem, cut the membrane open and remove all loose fasteners before installing the slip sheet.
- c. If a PVC membrane has been installed directly over styrene insulation without a separation sheet, then the old membrane must be removed, damaged insulation replaced, and an approved slip sheet installed.
- d. If the existing membrane is ballasted and the Duro-Last membrane is to be mechanically fastened, it is necessary to do fastener pullout tests on the deck. Also, the type of insulation and its density needs to be determined to ensure that the insulation will meet the Duro-Last specification (See "Substrate Separation", page 4). Be aware that if the existing insulation is "loose-laid" it must be fastened with an approved fastening pattern (See Detail 1020).

RECOVER – Metal Roof Recover/Retrofit

- a. The metal roof panel must be clean, smooth, and free of sharp edges and loose foreign material. Damaged areas and other factors affecting the installation of the Duro-Last roofing system must be repaired prior to the installation of the membrane.
- b. A metal roof panel must be separated from the Duro-Last membrane by using a recover board of at least 7/16-inch hardboard (gypsum), plywood, or oriented strand board (OSB) or 1-inch rigid insulation. When 1-inch rigid insulation is used, flute filler must be used and must consist of polyisocyanurate insulation. Note: According to International Building Code (IBC), the use of above-deck thermal insulation (including extruded or expanded EPS) is covered with an approved roof covering and passes the tests of FM 4450 or UL 1256 when tested as an assembly. The gaps between the ribs of the metal and the insulation fill cannot exceed the recover board manufacturer's recommendation for spanability. Flute filler must be fastened as needed to hold it in place. (Note: Duro-Last fanfold may be used if the flutes are filled with no gaps exceeding 1/4 inch total in between metal ribs.)

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

- c. Insulation/recover board must be neatly fitted to the roof deck and its penetrations. 4 x 8-ft. boards must be attached with a minimum of 5 fasteners/distribution plates. See details 1020 & 1030 found in the detail section of this manual for mechanical attachment of additional sizes of recovery boards. Gaps between insulation/recovery boards cannot exceed 1/4 inch in width. No more insulation/recovery board will 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 plates as well as approved fastening patterns are required for attachment of all insulation/recover board. Contact the Duro-Last Engineering Services Department with any questions.
- d. High-density wood fiberboard is acceptable on metal building recovers when the building slope is at least 1 inch vertically for every 12 inches horizontally. High-density wood fiber will not be accepted as flute filler.
- e. Plywood is acceptable to recover metal roofs. The minimum thickness, if it is being used as recover board, shall be 7/16 inch. Fasteners must penetrate through both the plywood and the existing metal roof.
- f. If plywood will be acting as the new substrate for membrane attachment, the plywood must be a minimum of 9/16 inch thick and a pull-test must be conducted on the new lumber to determine the proper lap spacing and attachment along the tab. Contact the local building authority to determine compliance of deck attachment to the building structure. Note: It is the responsibility of the contractor to ensure that the weight requirements of the building are not exceeded when installing additional materials over pre-engineered buildings.

NEW CONSTRUCTION

- a. All concrete surfaces must be troweled smooth. If the concrete surface is not smooth, a minimum 3/8-inch fan fold board, supplied by Duro-Last, is required.
- b. The roof deck or existing roof system must be clean, smooth, free of sharp edges, and loose foreign material. Damaged areas and other factors affecting the installation of the Duro-Last roofing system must be repaired prior to the installation of the membrane.
- c. A metal deck must be separated from the Duro-Last membrane by at least 7/16-inch hardboard (gypsum, plywood, or oriented strand board) or 1-inch rigid insulation. 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.
- d. All plywood surfaces must be smooth and free of all foreign material. Gaps between sheets of plywood should not exceed 1/4 inch. Prior to the installation of the membrane an approved slip sheet or duct tape must be installed over any H-clips if they are used on any plywood decking.

INSTALLATION

WOOD NAILER

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 lb of force per linear ft. of nailer in any direction. Fasteners used to attach wood nailers must be spaced no greater than 18 inches apart. Wood nailers are required in any situation where 1 inch 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.

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 prior to 2003 of age is unlikely to contain the copper based treatments.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

INSULATION SELECTION AND INSTALLATION

Insulation products must be neatly fitted to the roof deck and its penetrations. 4 x 8-ft. insulation boards must have a minimum of 5 fasteners/distribution plates installed per board. No gap should exceed ¼ inch 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 attachment of all insulation products.

The minimum compression characteristics of insulation products as determined by ASTM D-1621 will be as follows:

- Polyisocyanurate products: 20 psi
- Fiberglass products: 16 psi
- Extruded polystyrene products: 25 psi
- Expanded polystyrene products: 15 psi and 1.5 pcf density (certified) and a minimum 1 inch thick.
- Expanded polystyrene products covered with or laminated to a hardboard facer: 12 psi and 1.25 pcf densities and a minimum of 1 inch thick.

PERIMETER MEMBRANE INSTALLATION

- a. The first fastening tab on all perimeter roof sections that have tabs parallel with the roof edge or parapet wall must be between 24 – 36 inches from the edge or the wall. If the parapet wall is greater than 24 inches tall, the perimeter tab may be placed up to 63 inches away from the roof edge when utilizing roof sections with maximum lap spacing of 60 inches on center.
- b. When using roof sections with fastening tabs spaced 120 inches, the first tab along all perimeter roof edges must be located 24 – 36 inches from the edge. The second tab must be placed 84 – 96 inches from the edge. Parapet wall height does not change this requirement.
- c. On buildings with multiple roof levels, treat all roof edges as perimeter edges if they stand 3 ft. or more above adjacent or surrounding roof areas.
- d. On buildings located in high wind zones (greater than 110 mph) or on structures that are 40 feet or taller, additional wind tabs and/or increased fastener density may be required. Contact the Duro-Last Engineering Services department for assistance.

MEMBRANE INSTALLATION

- a. The prefabricated roof section is unrolled and positioned on the deck to expose the first securement tab. The securement tab is mechanically fastened to the deck with approved fasteners and stress distribution plates (see "Fastener Selection and Deck Types", page 6). The roof section is then unfolded and pulled taut to remove any wrinkles exposing the second securement tab. This process is repeated until the entire roof section has been mechanically fastened to the deck, including all securement tabs and edges. The next section of roofing membrane is then positioned to provide a minimum of 6 inches overlap. The above procedure is repeated for each roof section.
- b. The edge of the stress distribution plate must be installed flush with the outside edge of a fastening tab.
- c. The maximum fastener spacing is 18 inches on center in rows 60 inches apart. For tab spacing greater than 60 inches, the maximum fastener spacing is 12 inches on center. (Refer to the Fastener Spacing Table, page 7.)
- d. When installing membrane, ensure that the appropriate side of the membrane is exposed to elements. For white and gray membrane, the smooth side should be exposed. On the tan membrane, it will be the embossed side of the membrane that should be exposed.
- e. If the membrane is attached to the support structure beneath the roof deck, special precautions must be taken. If the membrane is attached to a steel purlin structure, all fasteners must penetrate a minimum of 1-3/4 inches from the top of the purlin using Duro-Last purlin fasteners. If the membrane is being attached to a wood truss structure, all fasteners must penetrate a minimum of 1 inch from the top surface of the truss with approved Duro-Last fasteners.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

HOT-AIR WELDING

- a. Position the membrane so that the top membrane overlaps the bottom membrane a minimum of 6 inches. Ensure the welding area is dry, 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 wide continuous weld is required.
- c. All field-welded seams must be inspected with a tack claw or similar tool (cotter key extractor), and all deficiencies repaired prior to inspection by Duro-Last.

ROOF PENETRATIONS

- a. The Duro-Last membrane must be fastened at the base of all roof penetrations. Such penetrations include, but are not limited to, pipes, drains, curbs, pitch pans, and expansion joints.
- b. The fastener spacing around penetrations shall be the same as that being used to fasten the roof membrane adjacent to the penetration. A minimum of one fastener is required.

FLASHINGS

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

PITCH PANS

- a. Use pitch pans only when standard Duro-Last flashings cannot be used.
- b. Only Duro-Last Duro-Caulk Plus or approved sealer may be used when creating a pitch pan.
- c. All pitch pans must be terminated at a minimum of 4 inches above the roof surface.
- d. See Details 4030, 4040 and 4045 for installation references.

TWO WAY AIR VENTS

- a. Install Duro-Last Two-Way Air Vents following these guidelines:
 1. Install at a rate of one vent for every 1,000 ft² of deck area.
 2. Do not install the vents near drains or in valleys.
 3. Evenly space the vents across the roof area and center them between fastening tabs.
- b. It is the contractor's responsibility to ensure that adequate secondary drainage exists to prevent flooding during extreme weather when water could infiltrate the two-way vent.
- c. See Detail 5020 for installation references.

ROOF DRAINS AND SCUPPERS

- a. Drain Assemblies with Clamping Rings
 1. All existing roofing materials must be removed from drain bowl and clamping ring.
 2. Use Duro-Caulk Plus between the membrane and clamping ring (1/2 tube minimum).
 3. 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. If bolts are broken or missing, replacements must be installed.
- b. Duro-Last Drain Boots
 1. If the Duro-Last drain boot is to be used, apply 1/2 tube of sealant (minimum) to the outside of the drain boot and insert it into the drain.
 2. Install composite compression drain rings as low into the drain as possible.

SPECIFICATION: MECHANICALLY FASTENED SYSTEMS

- c. See Details 2011, 2020, 2021, 2025, 2030, 2041, 2050, 2060, 2061, 2070 and 2071 for installation references.

EXPANSION JOINTS

- a. See Details 1140, 1150, 1160, 1170 and 6160 for installation references.

WALKWAY PADS

- a. Duro-Last Roof Trak® III Walkway Pad is recommended at all roof access points, service units and high traffic areas. The risk of potential third party damage to the Duro-Last roofing system may increase should the building owner choose not to utilize the Duro-Last Roof Trak III Walkway Pad. Note: Prior to inspection of the installation by Duro-Last, attach only one side of any Walkway Pads that will be covering any field seams. This will allow the Duro-Last Technical Representative to inspect the entire field seam. After the inspection, hot-air weld the remaining side to complete the attachment of the pad.

CAUTIONS AND WARNINGS

1. Duro-Last Roofing, Inc. is not responsible for damage that may occur as a result of moisture created from condensation occurring within or beneath a roof deck subassembly or building.
2. Duro-Last recommends the use of vapor barriers, however it is the responsibility of the Duro-Last contractor of record to ensure that all applicable specifications, building codes, regulations and ordinances are complied with and followed. A roofing professional, such as a consultant or architect, should be utilized for correct roof system design prior to installing any roof system.
3. All Polystyrene insulation (Styrofoam, Formular, Dow, EPS, etc. - blue, white, gray, green, or pink) must have an approved non-styrene facer or an approved slip sheet covering when installed in direct contact with existing or new PVC membranes. Polyethylene or polypropylene facers are acceptable only after testing, and approval by Duro-Last for compatibility.
4. Phenolic foam is not an approved insulation in new construction or re-roofing applications. The Duro-Last roofing system may not, under any circumstance, be installed over phenolic foam.
5. Perlite and wood/mineral fiber-boards are not acceptable substrates for the Duro-Last membrane. (See #5 below for exception on wood fiber board)
6. High density wood fiber boards are only acceptable on a metal roof that is being retrofitted where the slope of the roof will be 1 inch per 12 inches or greater.
7. If asbestos is encountered, the building owner must be notified at once. The owner is solely responsible for determining the proper course of action.
8. A Duro-Last roof shall not be installed over areas of roofs if one or more of the following conditions exist:
 - a. The building structure is not sufficient to handle the load 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 exhausted directly onto the roof or may come in contact with the roof in liquid form. (See "Chemical Resistance", page 4.)
 - e. Steam is exhausted directly onto the roof that is in excess of 120° F.



January 30, 2025

Roof Management Company, Inc.
32402 W. 8 Mile Rd.
Farmington, MI 48336

Dear Roof Management Company, Inc.

I am pleased to inform you that you have earned the highest quality distinction given to the best performing Duro-Last® contractors, the **"Platinum Contractor Award."** This achievement has placed you in the top 3% of our contractors, consistently installing the highest quality roofing systems in 2024.

To achieve this award, you have installed and Duro-Last has inspected more than 500,000 sq. ft., scored in the "outstanding" category on all commercial installations and warranted five or more commercial jobs in 2024. In other words, you have worked your way to be the "best of the best" through your commitment to quality, dedication to detail and hard work. Congratulations!

Duro-Last produces the "World's Best Roof®" and we rely on your expert workmanship to ensure a high-performing, long-lasting roofing system. Again, congratulations on a job well done. We are truly honored to work with contractors like you, who value quality as much as we do.

Sincerely,

A handwritten signature in black ink, appearing to read 'Aaron Kissner', is written in a cursive style.

Aaron Kissner
Director of Quality Assurance and Warranty Services

ah



PRODUCT DATA SHEET

DURO-LAST® 50-MIL MEMBRANE

Advantages:

Duro-Last® 50-Mil (DL50) membrane is an excellent choice for projects requiring a long lasting, energy efficient roofing membrane. The membrane is available in prefabricated sections or as roll goods. A complete line of custom prefabricated accessories is available for the DL50 membrane.

Description:

DL50 membrane is composed of PVC film laminated to both sides of a reinforcement fabric (weft-inserted scrim).

Duro-Last membranes must not be used with Duro-Last EV membranes.

PVC Film - Proprietary thermoplastic PVC formulation of resins, plasticizers, stabilizers, biocides, flame retardants, and U.V. absorbents.

- PVC film above weft-inserted scrim – 28 mil

Weft-Inserted Scrim - An 18 x 14 polyester fabric construction with weft insertion, composed of 840 x 1000 denier threads, provides superior tear and puncture resistance. The polyester thread is treated to prevent wicking.

Total Thickness – 50 mil, nominal.

Weight – 0.29 lb. per square foot.

Colors – White, tan, gray, dark gray and terra cotta.

R-Value – 0.1 ft²·°F·hr/Btu.

Available Configurations:

Prefabricated Sections – DL50 is available in prefabricated sections up to 2,000 sq. ft. with a maximum 80 ft. in either dimension.

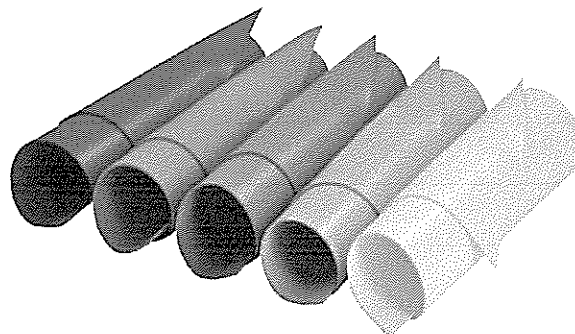
Roll Good – Typical Dimensions

Width	Length (max.)	Roll Area	Approx. Weight	Approx. Coverage ¹
64 inches	100 ft.	533 sq. ft.	155 lb.	483 sq. ft.
48 inches	100 ft.	400 sq. ft.	116 lb.	350 sq. ft.
32 inches	100 ft.	267 sq. ft.	77 lb.	217 sq. ft.
16 inches	100 ft.	133 sq. ft.	39 lb.	83 sq. ft.

¹ Assuming 6-inch overlap

Energy Efficiency:

White DL50 membrane is an excellent product for complying with California Title 24, LEED® and other energy efficiency programs requiring the use of a highly reflective roof membrane. It is an ENERGY STAR® qualified product.



Cool Roof Rating Council (CRRC)¹

	Solar Reflectance		Thermal Emittance		Solar Reflective Index (SRI)	
	Initial	3-yr	Initial	3-yr	Initial	3-yr
White	0.88	0.68	0.87	0.84	111	82
Tan	0.39	0.33	0.89	0.89	43	35
Gray	0.47	0.40	0.89	0.89	54	45
Dark Gray	0.26	0.25	0.88	0.89	26	25
Terra Cotta	0.26	0.24	0.89	0.88	26	23

¹ Duro-Last's CRRC Product ID: 0610.

LEED & LEED-EB Credits - White DL50 membrane alone can obtain 1 credit in either U.S. Green Building Council's LEED or LEED-EB programs. In combination with other design criteria the membrane may help attain other credits.

LEED Credit Category	Duro-Last Attribute
Sustainable Sites Credit 7.2 Heat Island Effect: Roof	Solar Reflective Index (SRI) SRI = 111

LEED-EB Credit Category	Duro-Last Attribute
Sustainable Sites Credit 6.2 Heat Island Effect: Roof	ENERGY STAR Qualified Thermal Emittance = 0.87

Warranty:

The following warranties are available for projects utilizing DL50 membrane. Contact Duro-Last for warranty details.

Available Warranties				
Supreme	15-YR NDL	15 + 5 Material Only ²		15 + 5 ²
Ultra	15-YR Hail ¹	15-YR Hail & High Wind ¹	15-YR High Wind ¹	20-YR High Wind ¹
Basic	15-YR NDL ¹		20-YR NDL ¹	
Residential	15-YR Material Only ¹		20-YR Material Only ¹	

¹ Excludes consequential damage coverage.

² Excludes consequential damage coverage for last 5 years.

DURO-LAST® 50-MIL MEMBRANE

Codes and Standards:

Underwriters Laboratories (US & Canada), FM Approvals, ICC-ES (ESR-1660), Canadian Construction Materials Centre (CCMC 13299-L), State of Florida, Miami-Dade County, Texas Department of Insurance.

Storage:

Store rolls lengthwise on pallets. Use tarps to keep rolls dry.

Membrane Attachment:

Mechanically Fastened – DL50 membrane may be mechanically attached to a variety of roof deck and wall materials. An appropriate slip sheet or cover board may be required. Refer to the Duro-Last Mechanically Fastened Systems Specification for prefabricated system requirements. If using roll goods, refer to the Roll Good Mechanically Fastened Systems Specification.

Duro-Bond® System – The Duro-Bond system (induction weld) may be used to attach DL50 membrane. Refer to the Duro-Last Duro-Bond System Specification for system requirements.

Adhered – DL50 membrane may be adhered to a variety of properly prepared roof decks, walls, cover boards and insulations. Refer to the Duro-Last Adhered Systems Specification for system requirements.

Physical Properties:

DL50 membrane has been subjected to the tests required by ASTM 4434 "Standard Specification for Poly (Vinyl Chloride) Sheet Roofing" and has been classified as a Type III, internally reinforced sheet. The results of each test are listed below. ASTM's *Overall Thickness* requirements for the membrane are plus or minus 10% (nominal) of the listed *Typical Value*.

Physical Property	Test Method	ASTM D4434 Requirement	Result	Typical Value
Overall Thickness	ASTM D751	≥ 0.045 and ≤ 0.055 in. (≥ 45 and ≤ 55 mil)	PASS	0.050 in. (50 mil), nominal
Thickness Over Scrim	ASTM D7635	≥ 0.016 in.	PASS	0.028 in. (28 mil)
Breaking Strength ¹	ASTM D751 Grab Method	≥ 200 lbf./in.	PASS	438 x 390 lbf./in.
Elongation ¹	ASTM D751 Grab Method	≥ 15%	PASS	31% x 31%
Seam Strength	ASTM D751 Grab Method	≥ 328 lbf. (75% of Breaking Strength.)	PASS	417 lbf.
Tear Strength ¹	ASTM D751 Procedure B	≥ 45 lbf.	PASS	132 x 163 lbf.
Low Temp. Bend	ASTM D2136	Must pass at -40° F	PASS	PASS
Heat Aging	ASTM D3045	Conditioned for 56 days in oven maintained at 176° F.	PASS	PASS
Accelerated Aging	ASTM G154 (Formerly G53)	5,000 hours total test time. Irradiance level of 0.68 W/m ² -nm. Cycle: 8 hours at 145° F, 4 hours condensation at 122° F.	PASS	PASS
Dimensional Stability ¹	ASTM D1204	Conditioned for 6 hours in oven maintained at 176° F. Allowable change: ≤ 0.5%	PASS	-0.30% x -0.45%
Water Absorption	ASTM D570	Immersed in water at 158° F for 168 hours. Allowable weight change: ≤ 3%	PASS	1.7%
Static Puncture	ASTM D5602	≥ 33 lbf.	PASS	56 lbf.
Dynamic Puncture	ASTM D5635	≥ 14.7 ft.-lbf. (20 J)	PASS	≥ 14.7 ft.-lbf. (20 J)

¹ Typical values are shown for both machine and cross machine directions. The machine direction results are listed first.

Additional Tests

Fungi Resistance	ASTM G21	No sustained growth or discoloration
Moisture Vapor Transmission	ASTM E96, Proc. B, Method A	< 0.35 U.S. perms





Steel Security Replacement Doors

[HomeResources](#) Steel Security Replacement Doors

Steel Security Replacement Doors

Can anyone provide an entry door system that is easy to install, offers increased security and is beautiful at the same time? Well, MMI DOOR has done just that. Our unique MPact Replacement Door System is designed for:

- Convenience - Fits inside your existing door frame and can be sized to fit your opening in most cases.
- Security - Surrounded by an 18 gauge steel frame system, our MPact unit provides ultimate security.
- Curb Appeal - Available in our most popular steel door designs, choose from 15 decorative glass collections, internal muntins, blinds, shades, prefinishing services and more!

Whether it be convenience, security, curb appeal or all three—the MPact Replacement Door System may be the right choice for you.

A Beautiful New Door

A new steel entry door can add substantial curb appeal to your home without costing a fortune. Steel exterior doors are durable and manufactured to prevent water absorption, resist rust and come factory primed for easy finishing.



The image shows a side-by-side comparison of a door replacement. On the left, labeled 'Before....', is an old, weathered, light-colored wooden door with peeling paint and a brass doorknob. On the right, labeled 'After', is a new, white, six-panel steel door with a gold-colored doorknob and a small transom window above the door. The door is set in a white frame.

Key Benefits:
Quick & Easy installation; installs in half of the time as a new construction unit

Other Benefits Include:

- Convenience – fits inside your existing door frame
- Prehung on a commercial, 18 gauge steel frame
- All steel door – 24 gauge face and 22 gauge reinforced edges for additional strength
- 14 Pre-set security installation with fastening points secure the opening – 6 at the critical lockset impact area
- All doors are pre-prepped for entry and deadbolt locks
- Weatherstrip system – 5 fin door sweep, adjustable sill, weatherstrip stop and corner seals complete the entire package
- 2/6, 2/8, 2/10 & 3/0 – 6/8 and 7/0 sizes are available. Sizes may vary by door style

Please Note: 2/8 replacement doors with decorative 1/2 & full lites and 2/6 replacement doors with clear 1/2 & full lites will require a glass offset of 1/4" from lock prep.

Before.... After
Actual MMI DOOR Customer's Door

Prefinishing is Available



Same Color
Both Sides



Different Color
Both Sides



Same Color
Storm Door and
Entry Door
(10 matching colors)

Black storm
door

MMI DOOR BOLD COLORS



MMI DOOR STANDARD COLORS

☐ Matching Storm Door Color Available

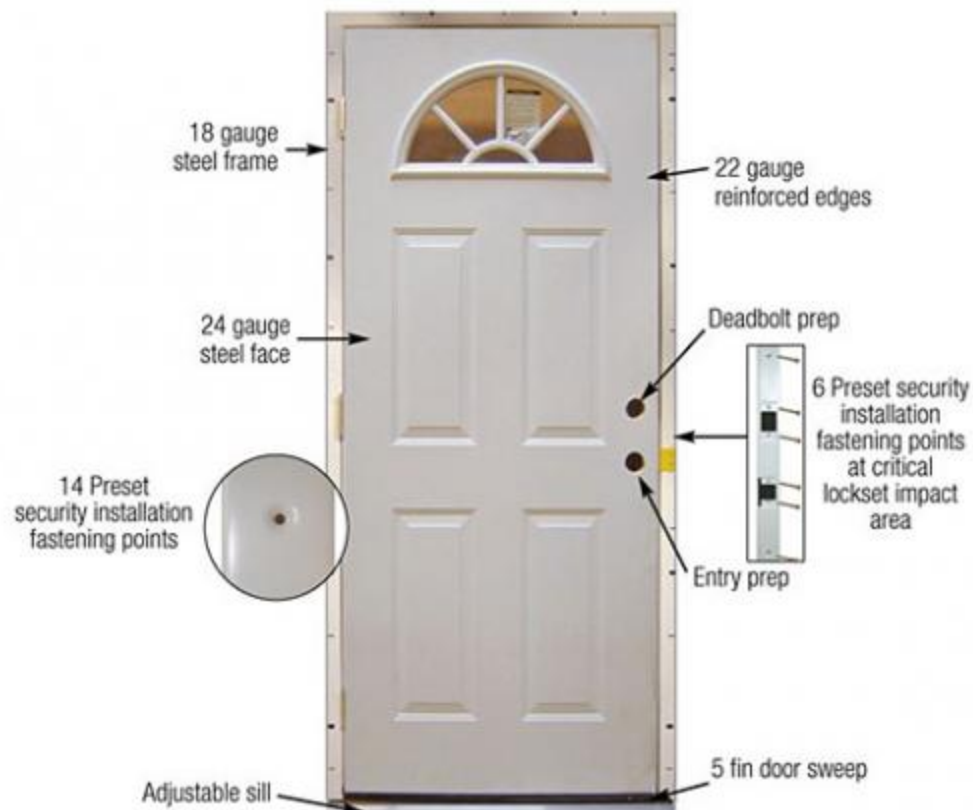


White main door



Some of our Steel Replacement Doors do qualify for the Energy Star® Program. Please refer to www.mmidoor.com for a complete list of our qualifying products. (Qualification based on 2015 Energy Star® Program Criteria and can change)

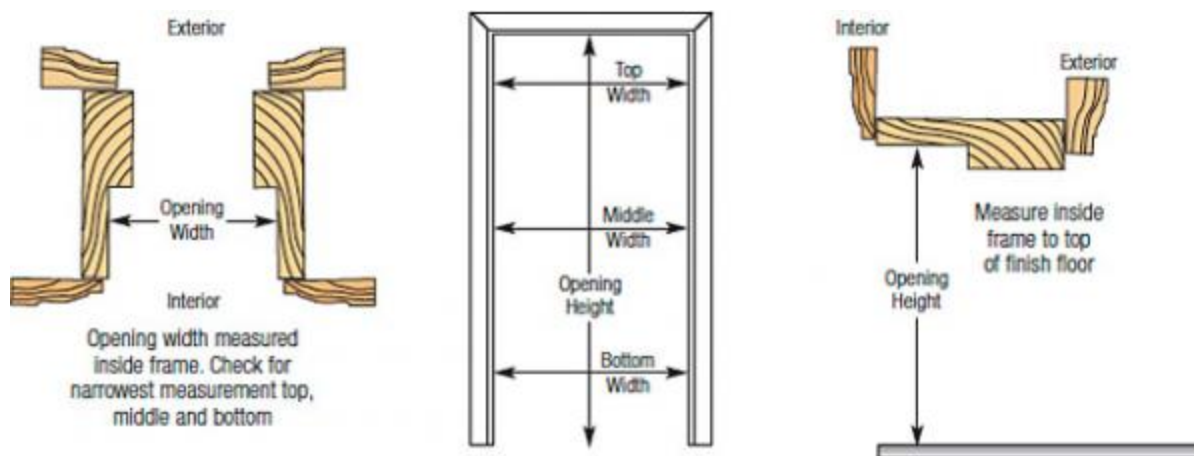
Anatomy of a Replacement Door



How To Install



How to Measure



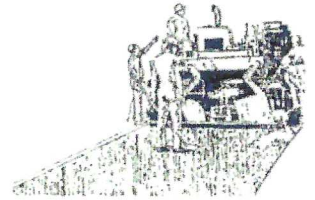
Opening Chart

SIZE	FITS THESE EXISTING OPENINGS			
	WIDTHS		HEIGHTS	
(Nominal)	Minimum	Maximum	Minimum	Maximum
2'6" x 6'8"	29-3/4"	30-1/2"	80"	80-1/2"
2'8" x 6'8"	31-3/4"	32-1/2"	80"	80-1/2"
3'0" x 6'8"	35-3/4"	36-1/2"	80"	80-1/2"
3'0" x 7'0"	35-3/4"	36-1/2"	84"	84-1/2"

- [Overview](#)
- [Anatomy of a Door](#)
- [Before You Buy a Door](#)
- [Care & Maintenance](#)
- [Glass Options](#)
- [Door Hardware & Accessories](#)
- [Door Materials](#)
- [Exterior Doors](#)
 - [Fiberglass Doors](#)
 - [Fiberglass Graining Options](#)
 - [Steel Doors](#)
 - [Steel Replacement Doors](#)
- [Frame Types](#)
- [Glossary of Terms](#)
- [Green Initiatives & Testing](#)
- [Handing and Swing](#)
- [Glass Caming](#)
- [How To Install a Door](#)
- [How To Measure](#)
- [How To Video Library](#)
- [Interior Doors](#)
- [Marketing Material](#)
- [MMI Mobile App](#)
- [Paint and Stain Information](#)
- [Patio, French & Double Doors](#)
- [Pre Hanging Information](#)
- [Product Warranties](#)
- [Selecting a Door Configuration](#)

Phone: [\(833\) 344-0031](tel:8333440031) Email: info@mmidoor.com

Hours: **Mon-Fri 7:00am-5:00pm (EST)**



Purchaser	68542-2025
CONTINENTAL CONSTRUCTION MANAGEMENT 32500 TELEGRAPH ROAD SUITE 100 BINGHAM FARMS MI 48025	
RAY SCHORNAK 248-833-0550 Fax: 248-833-0551	

Job Site	6/4/2025
WEST BOSTON APARTMENTS 2725 WEST BOSTON DETROIT, MI 48203	
Estimator: Alex Williamson S _____ L 95 T 57	

Re: REMOVE AND REPLACE LOT: 6,129 SF

1. REMOVE 6,129 SF OF AREA AT 4" DEPTH, HAUL BROKEN OFF SITE.
2. INSTALL 2.5" 1100L LEVELING ASPHALT MATERIAL AND COMPACT USING VIBRATORY ROLLER.
3. SPRAY LIQUID BONDING OF SS-1H FOR PROPER ADHESION BETWEEN ASPHALT LAYERS.
4. INSTALL 1.5" 1100T WEARING ASPHALT MATERIAL AND COMPACT USING VIBRATORY ROLLER.
5. RESTRIPE PARKING LOT PER ORIGINAL LAYOUT.

***PROPOSAL EXCLUDES PERMIT FEE IF REQUIRED BY CITY OF DETROIT.**

***AL'S ASPHALT PAVING COMPANY NOT RESPONSIBLE FOR DAMAGE TO GATE LOOP WIRES DURING CONSTRUCTION OPERATION.**

***NO ALLOWANCES HAVE BEEN MADE FOR UNDERCUTTING OF SOFT AREAS AND INSTALLING 21AA STONE AGGREGATE. IF NEEDED PRICE WILL BE DETERMINED BY AREA.**

EXCLUSIONS, unless specifically identified as included in our scope of work, the following are excluded: Permits, bonds, inspection fees, undercutting, work in the public R.O.W., handling or disposal of hidden or contaminated debris, dumpsite charges, landscape or irrigation restoration, sawcutting and removals, use of additional materials beyond stated depths, backfill of undercut areas, backfill and seeding of new curbs or walks, any work which is not specifically described in our proposal, cleaning of heavy dirt and debris, engineering, layout, testing, or winter protection of concrete. It is the responsibility of the purchaser to read and understand these conditions fully. Failure to do so will not be an acceptable excuse for non-payment of additional work.

Cost is based on 1 mobilizations. Additional mobilizations will be at additional cost.

The prices in this quote are based on current costs for fuel and materials and are subject to change daily. This quote is valid for 10 days.

ACCEPTED: The above prices, specifications and general conditions on the reverse side are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as stated above.

(Please review the terms and conditions on the reverse side, which are incorporated herein and form an integral part of this contract.)

25500 Brest Road · Taylor, MI 48180 · Office (734) 946-1880 · Fax (734) 946-4502



WEST BOSTON 2
APARTMENTS
2725 W Boston
(313) 778-1470











