

FLEXCLAD® INSTALLATION INSTRUCTIONS

OVERVIEW

FlexClad® is a pre-fabricated, self-sealing, sheet-type waterproofing membrane designed to protect ductwork, piping and in sub-grade applications. FlexClad® can be applied over rigid insulation board, cold pipes, plenums, storage tanks, iron, copper, steel, and concrete. It can also be used for piping systems, pipelines and other below-grade structures. FlexClad® is designed for exterior, interior or sub-grade use, and may be used in direct burial applications.

READ COMPLETE INSTRUCTIONS BEFORE INSTALLATION

- Ducts must be sealed and airtight; insulation secured properly with seams taped and corners reinforced
- Substrate must be clean, dry and free of containments
- Install FlexClad® where the ambient air and surface temperature is at 40°F (4°C) or above
- Top of ductwork **MUST** be sloped for drainage to prevent standing water
- FlexClad® uses a pressure-sensitive adhesive system; roll firmly with a hand roller paying special attention at seams, overlaps and duct bottoms

SECTION 1: PREFERRED SUBSTRATES

- Clean, non-pitted metal ductwork
- Rigid foil-faced insulation board (Polyiso or FSK)
- Rigid foil-faced EPS insulation
- Rigid extruded polystyrene (XPS) insulation
- Primed metal surfaces (iron, steel, copper, etc.)
- Primed concrete surfaces
- **DO NOT** use over non-rigid insulation



SECTION 2: SURFACE PREPARATION

- The surface must be free of dust, dirt, oil, dew, moisture, frost or other foreign material that will prevent proper adhesion
- For new metal surfaces, wipe the surface with acetone to remove oil, grease, hand prints and processing lubricants
- Prime existing metal and masonry surfaces with an MFM-approved primer (see Technical Bulletin on website)
- Rigid insulation board without foil-facing, such as extruded polystyrene, requires MFM Low-VOC Spray Adhesive™

*TIPS: Use metal reinforcing strips on insulation corners to maintain shape for a neat appearance (as shown in photo above).
Tape gaps between insulation boards.*

SECTION 3: MFM LOW-VOC SPRAY ADHESIVE™

MFM Low-VOC Spray Adhesive improves the adhesion in cold weather, on shaded surfaces and in hard-to-reach areas.



It can also be applied at overlap areas for improved adhesion. Apply a light coat direct to the substrate and wait 2-3 minutes, depending on humidity and wind conditions, or until surface no longer looks wet.

MFM Low-VOC Spray Adhesive features high strength, high tack and is VOC compliant (VOC Compliant CARB/OTC). Minimum installation temperature is <35°F (<1.7°C).



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SECTION 4: APPLYING FLEXCLAD®

- Tools required for installation are a sharp utility knife, measuring tape, straight edge and hand roller
- Always measure and cut FlexClad® in easy-to-manage lengths; DO NOT try to maneuver the roll to apply product
- Position pre-cut length of FlexClad® into place and remove release liner from one edge
- Secure membrane into place with hand pressure, making sure membrane is properly aligned
- Pull release liner from behind membrane and continue to press FlexClad® into place
- Roll entire surface firmly with a hand roller
- When applying additional courses, overlap FlexClad® 3" (7cm) on side laps and 6" (15cm) on end laps
- ALWAYS roll entire surface and overlap areas for best adhesion possible

TIPS: Use a tape measure to mark overlaps by pressing end of tape into membrane to leave a slight overlap mark (see photo at right).

During cold weather installations, keep rolls of FlexClad® in a warm place until ready to apply and use MFM Low-VOC Spray Adhesive to help adhesion.



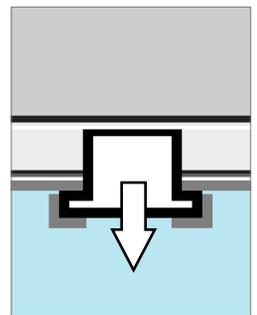
SECTION 5: IMPORTANT NOTES CONCERNING FLEXCLAD®

- FlexClad® 400 is 45-mil nominal thickness (roll lengths of 33.5' = 100 ft² Gross Coverage/92 ft² Net Coverage)
- FlexClad® 250 is 25-mil nominal thickness (roll lengths of 50.0' = 150 ft² Gross Coverage/138 ft² Net Coverage)
- Both products are self-sealing around punctures made by pins, screws and other fasteners, passing all ASTM D 1970 nail sealability tests
- The lighter weight of FlexClad® 250 may allow it to be installed without the use of pins
- MFM recommends pins on duct bottoms when installed over foil-faced FSK insulation

ADDITIONAL TIPS



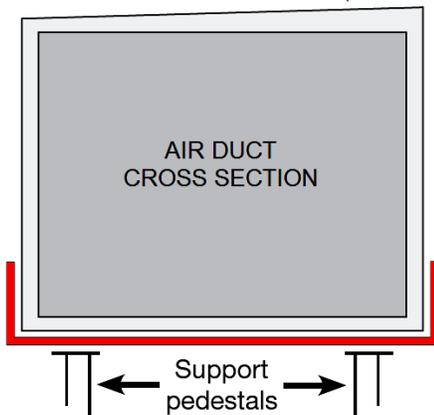
On ducts over 24" (60cm) wide, pin bottom 12" (30cm) on-center. Cover pins with a minimum piece of 3" (7cm) squares of FlexClad® to seal pins from weather.



Ductwork with air leaks will cause FlexClad® to "balloon," creating adhesion problems and seam leaks. To eliminate this problem, a roof soffit vent may be added in a sheltered location. Insert roof soffit through the FlexClad® membrane and rigid insulation to relieve air pressure. Cover the flanges of roof soffit with FlexClad® to waterproof opening.

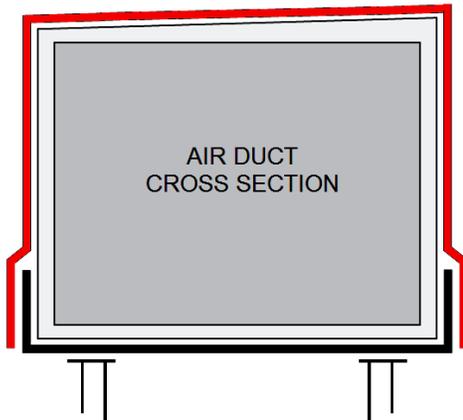
SECTION 6: FLEXCLAD® INSTALLATION INSTRUCTIONS FOR DUCTS NOT EXTENDING MORE THAN 4 FT (1.2m) HIGH

Insulation tapered at top
for proper drainage



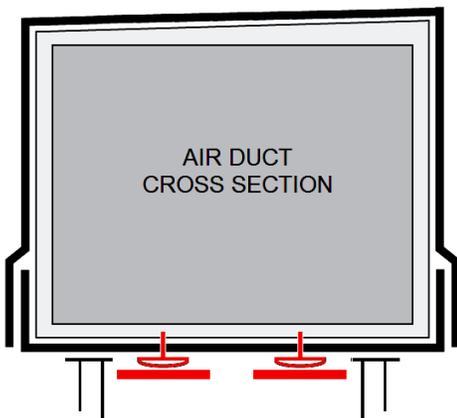
STEP 1: DUCT BOTTOM

- 1) Start the installation process at the duct bottom
- 2) If using FlexClad® 400, apply MFM Low-VOC Spray Adhesive to help adhesion (FlexClad® 250 typically does not need additional adhesion)
- 3) Measure the width of the duct and add 12" (30cm) for each 6" (15cm) side lap
- 4) Secure FlexClad® in place, making sure bottom membrane overlaps onto each side of the duct by a minimum of 6" (15cm)
- 5) Roll firmly with a hand roller



STEP 2: DUCT TOP AND SIDES

- 1) Measure the height of each side of the duct and the width across the top of duct – cut membrane to length
- 2) Start at the bottom of duct, working up over the top and down the opposite side
- 3) Make sure to overlap the membrane that is secured to the duct bottom
- 4) DO NOT lap FlexClad® onto bottom of duct, trim as necessary
- 5) Roll firmly with a hand roller, paying special attention to all overlaps



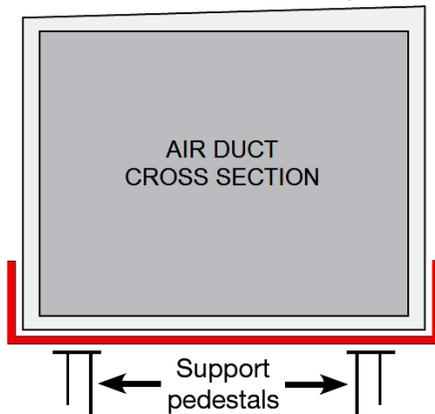
STEP 3: PIN BOTTOM (For Ducts Wider than 24"/61cm)

- 1) For ducts over 24" (61cm), the bottom membrane needs pinned
- 2) After hand rolling the entire section, pin bottom membrane 12" (30cm) on-center
- 3) Seal pins with 3" (7cm) sections of FlexClad®

For technical assistance, please contact MFM Technical Support at 800-882-7663. Technical documents and other information on FlexClad® is available at www.flexclad.com.

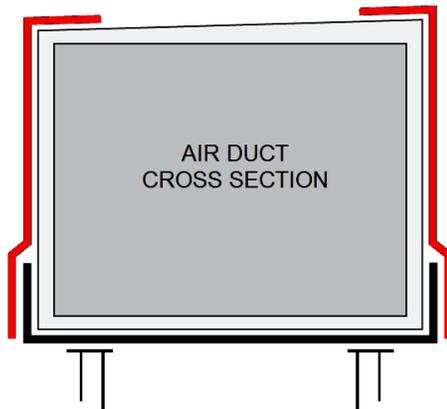
SECTION 7: FLEXCLAD® INSTALLATION INSTRUCTIONS FOR DUCTS EXTENDING HIGHER THAN 4 FT (1.2m) HIGH

Insulation tapered at top for proper drainage



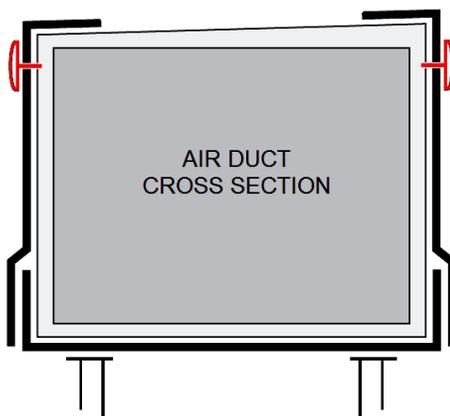
STEP 1: DUCT BOTTOM

- 1) Start the installation process at the duct bottom
- 2) If using FlexClad® 400, apply MFM Low-VOC Spray Adhesive to help adhesion (FlexClad® 250 typically does not need additional adhesion)
- 3) Measure the width of the duct and add 12" (30cm) for each 6" (15cm) side lap
- 4) Secure FlexClad® in place, making sure bottom membrane overlaps onto each side of the duct by a minimum of 6" (15cm)
- 5) Roll firmly with a hand roller



STEP 2: DUCT SIDES

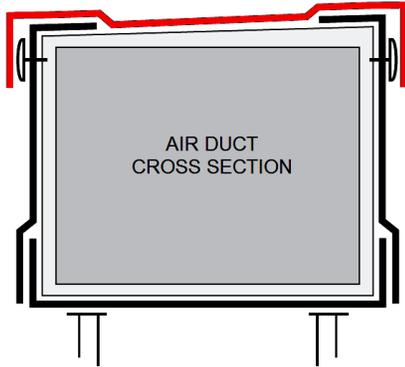
- 1) Measure the height of the duct and add 6" (15cm) for the top overlap
- 2) Start at the bottom of duct and work up towards the top
- 3) Wrap FlexClad® by a minimum of 6" (15cm) onto top surface of duct
- 4) DO NOT lap any FlexClad® onto bottom of duct
- 5) Repeat the same process on other side
- 6) Roll firmly with a hand roller, paying special attention to all overlaps



STEP 3: PIN SIDES

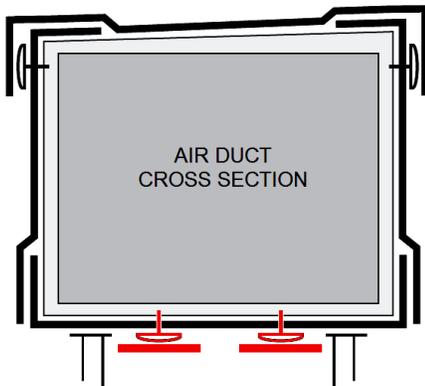
- 1) Pin side membranes 12" (30cm) on-center
- 2) Place pins approximately 3" (7cm) down from the top of the ductwork
- 3) Top layer will cover pins

SECTION 7: FLEXCLAD® INSTALLATION INSTRUCTIONS cont. FOR DUCTS EXTENDING HIGHER THAN 4 FT (1.2m) HIGH



STEP 4: DUCT TOP

- 1) Measure the width of the duct and add 12" (30cm) for each 6" (15cm) side lap
- 2) Secure FlexClad® in place, making sure that side laps cover the pins securing the side membranes
- 3) Roll firmly with a hand roller, paying special attention to all overlaps

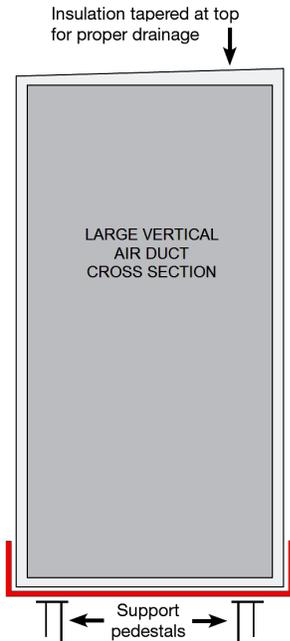


STEP 5: PIN BOTTOM (For Ducts Wider than 24"/61cm)

- 1) For ducts over 24" (61cm), the bottom membrane needs pinned
- 2) After hand rolling the entire section, pin bottom membrane 12" (30cm) on-center
- 3) Seal pins with 3" (7cm) sections of FlexClad®

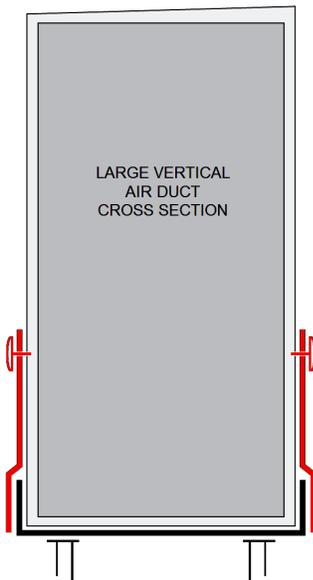
For technical assistance, please contact MFM Technical Support at 800-882-7663. Technical documents and other information on FlexClad® is available at www.flexclad.com.

SECTION 8: FLEXCLAD® INSTALLATION INSTRUCTIONS FOR LARGE VERTICAL RUNS



STEP 1: DUCT BOTTOM

- 1) Start the installation process at the duct bottom
- 2) If using FlexClad® 400, apply MFM Low-VOC Spray Adhesive to help adhesion (FlexClad® 250 typically does not need additional adhesion)
- 3) Measure the width of the duct and add 12" (30cm) for each 6" (15cm) side lap
- 4) Secure FlexClad® in place, making sure bottom membrane overlaps onto each side of the duct by a minimum of 6" (15cm)
- 5) Roll firmly with a hand roller

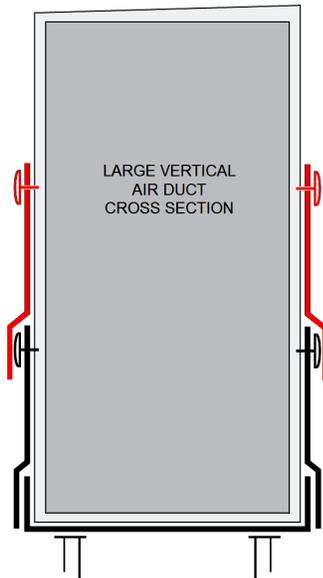


STEP 2: DUCT SIDES

- 1) Start the duct sides at the lowest level on the ductwork
- 2) Measure and cut FlexClad® in lengths that are manageable to work with and secure in place
- 3) FlexClad® should be flush with bottom of duct - DO NOT lap FlexClad® onto bottom of duct
- 4) Work left to right around duct using 6" (15cm) overlaps, as needed
- 5) Pin 12" (30cm) on-center approximately 3" (7cm) from the top of the membrane
- 6) Subsequent FlexClad® layers will cover pins
- 7) Roll firmly with a hand roller, paying special attention to all overlaps

Note: Work in 3 foot (91cm) sections as you move up the large vertical run of ductwork.

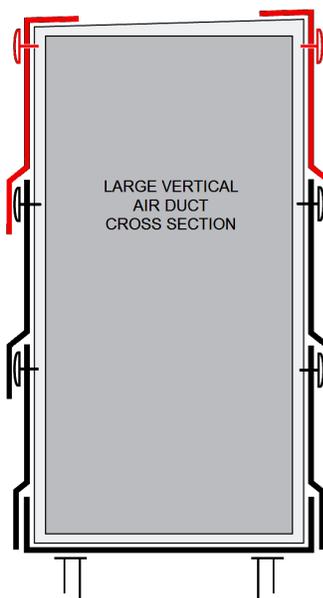
SECTION 8: FLEXCLAD® INSTALLATION INSTRUCTIONS cont. FOR LARGE VERTICAL RUNS



STEP 3: DUCT SIDES CONTINUED

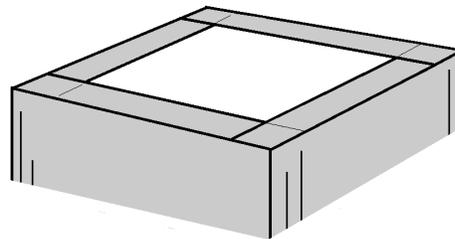
- 1) Repeat the same process as before
- 2) Stagger the starting point to avoid long vertical seams as you work up the ductwork
- 3) Make sure that FlexClad® fully covers the pins securing the lower membrane
- 4) Use 6" (15cm) overlaps, as needed
- 5) Pin 12" (30cm) on-center approximately 3" (7cm) from the top of the membrane
- 6) Roll firmly with a hand roller, paying special attention to all overlaps

Note: Repeat the installation process on the duct sides working to the top, as required by the size of the vertical ductwork.

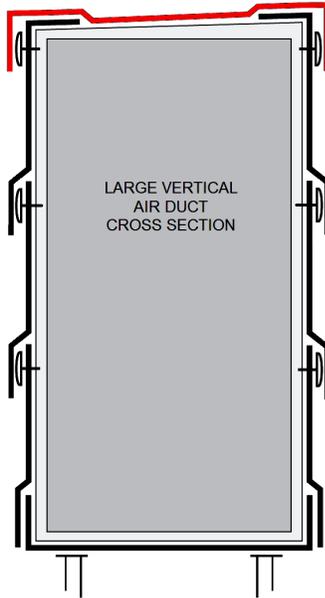


STEP 4: DUCT SIDES FINAL

- 1) As you reach the top of the ductwork, MAKE SURE that you have a minimum of 6" (15cm) overlap onto the top of the ductwork
- 2) At the corners, you will need to cut FlexClad® so it lays flat across top of ductwork to avoid large gaps in the membrane (see diagram below)
- 3) Pin 12" (30cm) on-center approximately 3" (7cm) from the top of the membrane
- 4) Roll firmly with a hand roller, paying special attention to all overlaps

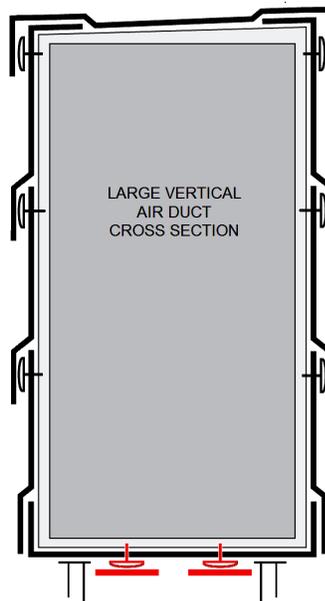


SECTION 8: FLEXCLAD® INSTALLATION INSTRUCTIONS cont. FOR LARGE VERTICAL RUNS



STEP 5: DUCT TOP

- 1) Measure the width of the duct and add 12" (30cm) for each 6" (15cm) side lap
- 2) Secure FlexClad® in place, making sure that side laps cover the pins securing the side membranes
- 3) If the top of the duct exceeds 36" (91cm), it will require two top layers of FlexClad® - make sure to overlap this side lap by a minimum of 3" (7cm)
- 4) Roll firmly with a hand roller, paying special attention to all overlaps



STEP 6: PIN BOTTOM (For Ducts Wider than 24"/61cm)

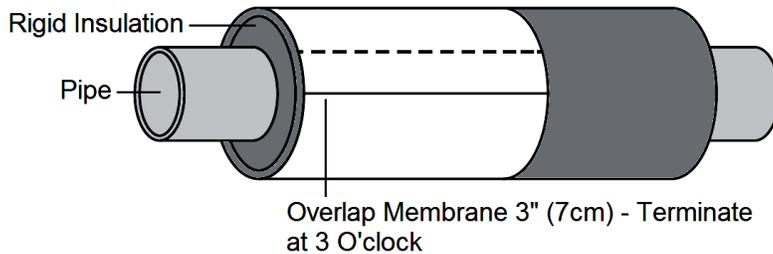
- 1) For ducts over 24" (61cm), the bottom membrane needs pinned
- 2) After hand rolling the entire section, pin bottom membrane 12" (30cm) on-center
- 3) Seal pins with 3" (7cm) sections of FlexClad®

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SECTION 9: FLEXCLAD® INSTALLATION INSTRUCTIONS FOR INSULATED PIPE



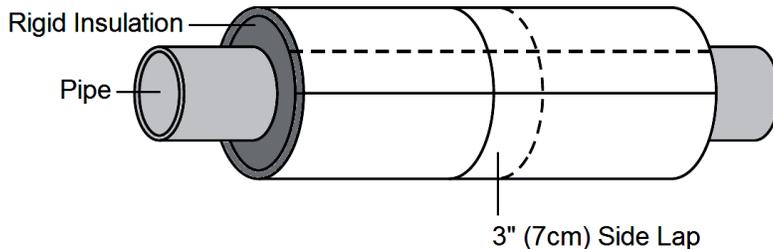
INSULATED PIPE - STEP 1



STEP 1: FIRST LAYER OF FLEXCLAD®

- 1) Measure the circumference of the insulated pipe and add 3" (7cm) for overlap
- 2) Start installing FlexClad® at the 2 o'clock position on the pipe and work around overlapping starting point by 3" (7cm)
- 3) Terminate membrane at the 3 o'clock position on the pipe so that moisture will not rest against seam
- 4) Roll firmly with a hand roller, paying special attention to overlap

INSULATED PIPE - STEP 2



STEP 2: ADDITIONAL LAYERS OF FLEXCLAD®

- 1) Repeat the starting point of installing the membrane
- 2) Make sure to make a 3" (7cm) side lap over previously installed membrane
- 3) Terminate at the 3 o'clock position on the pipe
- 4) Roll firmly with a hand roller, paying special attention to the side and end lap areas

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FLEXCLAD[®] INSTALLATION INSTRUCTIONS

SECTION 10: WARNINGS

- Follow instructions carefully. MFM is not responsible for failure caused by improper installation, structural faults or failure of underlying or adjacent materials.
- FlexClad[®] is slippery when wet. Avoid falls by using proper safety equipment and monitoring devices.
- Aluminum FlexClad[®] is reflective and can contribute to sunburn. Protect skin and eyes, and avoid prolonged exposure to direct sunlight.
- Store material in a dry place. Keep FlexClad[®] in carton until use. Exposure of stored material to direct sunlight or water will reduce adhesion.
- **DO NOT** install FlexClad[®] over uncured caulks or sealants. Active solvents will cause asphalt adhesive to liquefy and run. It is the responsibility of the installer to ensure compatibility with all solvents, caulks and sealants.

10-YEAR LIMITED WARRANTY

MFM Building Products Corp. warrants FlexClad[®] to be free from leaks caused by defects in materials or manufacturing for a period of ten (10) years from date of purchase when the membrane is installed according to published instructions. **For the most current product information, please visit www.flexclad.com.**

TECHNICAL SUPPORT AND CUSTOMER SERVICE

For technical questions or information, please contact MFM Technical Support:

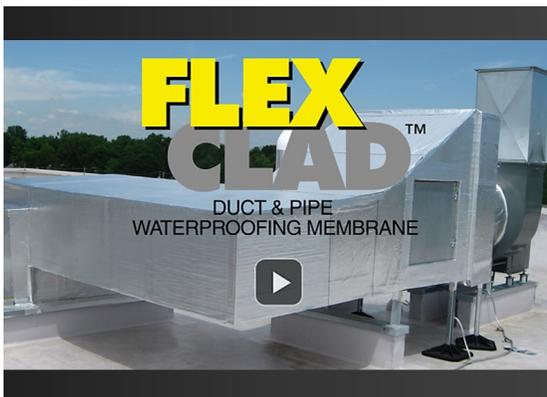
Technical Support

Monday-Friday, 7:30 am-4:30 pm EST
800-882-7663 • 740-622-2645
info@mfmbsp.com

For pricing, ordering information or general inquiries, please contact MFM Customer Service:

Customer Service

Monday-Friday, 8:00 am-5:00 pm EST
800-882-7663 • 740-622-2645
customerservice@mfmbsp.com



Review our Installation Video posted on YouTube or at www.flexclad.com.