

CHEM LINK CHEMCURB™ PENETRATION SEAL

DIVISION 7- THERMAL AND MOISTURE PROTECTION

SECTION 07 72 00 ROOF ACCESSORIES

SECTION 07 72 13 MANUFACTURED CURBS

PART 1 – GENERAL APPLICATION SPECIFICATIONS FOR ROOF PENETRATIONS

1.01 WORK CONDITIONS

- A. Do not apply the Pro Pack two part urethane pourable sealer if rain is expected within four hours after application time. 1-Part Pourable Sealer is not adversely affected by rain immediately after application. The roof surface should be dry during installation.
- B. Do not apply Pro Pack two part urethane pourable sealer below 40 degrees F., Cold temperatures can result in slow or incomplete cure.
- C. Do not apply over wet or oily surfaces, or uncured concrete.
- D. Do not apply directly to smooth surfaced A.P.P. modified bitumen products. A piece of granulated A.P.P. shall be installed around the roof penetration that will extend beyond the ChemCurb a minimum of 2" in all directions. This will provide a proper surface for bonding. Do not install ChemCurbs on TPO membranes without Chem Link TPO Primer. TPO Primer must be used to obtain proper bonds. Under no circumstances shall ChemCurbs be installed on Hypalon membranes.
- E. Do not use roof cement for night seals around roof penetrations. Roof cement is incompatible with Chem Link pourable sealants. Apply a bead of M-1 Structural Sealant around the base of each roof penetration to provide a temporary seal. Also, do not prime penetrations with asphalt primer. Apply additional M-1 Structural Sealant to the cleaned penetration, extending from the base of the penetration to a minimum of 3" above the Base. Tool the M-1 smooth. M-1 shall be applied to new penetrations in the same manner.
- F. In many instances, asphalt roof mastics and other sealants have been applied to the roof penetrations that extend above the profile of a ChemCurb. These sealants can act as a bond breaker and cause the Pro Pack or 1-Part Pourable Sealer to separate from the penetrations.
- G. It is imperative that the contractor remove as much of the contaminants as possible. The M-1 will act as a primer for the Pro Pack or 1-Part Pourable Sealer and will seal any residual contaminants that could adversely affect the pourable sealants. In order to give the M-1 sufficient time to cure, it is recommended that the M-1 (as a primer) be applied to the penetrations before the ChemCurbs are set in place and the Pro Pack is mixed. If large rectangular ChemCurbs are being installed, allow the M-1 to set and gain strength for a minimum of 1 hour before filling the ChemCurb.

PART 2 - DELIVERY, STORAGE AND HANDLING

- A. Examine all ChemCurb packages and containers upon delivery to make sure they are not damaged. Do not use any unlabeled products. If any products are unlabeled, notify Chem Link at (800)-826-1681.
- B. If ChemCurb products are stored in an unheated area during freezing conditions, make sure they are brought to room temperature 24 hours before use. The shelf life of unopened containers is one year from batch date printed on cans.
- C. Do not expose any of the ChemCurb products to moisture during storage.

PART 3 – CHEMCURB STANDARD SIZES AND ACCESSORIES

- A. Standard ChemCurb sizes are 7.5" i.d. and 5" i.d. round curbs. Each ChemCurb is 2" high.
- B. ChemCurb Straights are available in 6" and 12" lengths. These are used to make the ChemCurb longer. The 6" and 12" sections fit both the 7.5"i.d. and the 5"i.d. curbs.
- C. ChemCurb Corners are used to make box shaped curbs. Used with the Straights, ChemCurbs can be made to your own size specifications right on the job site. If multiple penetrations are present in one ChemCurb, a 1" space should be maintained between penetrations and the inside edge of the ChemCurb.
- D. ChemCurbs are made of weather and U.V. resistant gray polyester resin.
- E. Fitting cuts to any of the ChemCurb sections can be easily done with a power saw and masonry blade. Eye protection shall be worn while cutting at all times.

PART 4 – SURFACE PREPARATION

4.01 SINGLE-PLY (E.P.D.M., P.V.C. etc.)

All dirt, dust and other contaminants such as, but not limited to, water, ice, oil, grease, animal fat and industrial solvents shall be thoroughly cleaned away from the application area. Wipe the area with denatured / 100% rubbing alcohol and allow to dry. Do not use splice wash or gasoline.

NOTE: DO NOT USE CHEMCURBS ON TPO MEMBRANES WITHOUT CHEM LINK TPO PRIMER. TPO PRIMER SHALL BE APPLIED FROM THE BASE OF THE PENETRATION EXTENDING BEYOND THE PERIMETER OF THE CHEMCURB, ONE INCH IN ALL DIRECTIONS. TPO PRIMER WILL NOT WORK ON HYPALON MEMBRANES. CHEMCURBS CANNOT BE INSTALLED ON HYPALON MEMBRANES UNDER ANY CIRCUMSTANCES.

4.02 A.P.P. MODIFIED BITUMEN (SMOOTH)

As described above in section 4.01, prepare the surface of the application area as described in that section. Cut a piece of granulated modified bitumen large enough to extend 2" in all directions beyond where the ChemCurb is to be installed. Torch apply the pre-cut piece of granulated A.P.P. to the application area according to the modified bitumen manufacturer's most current specification book. Adhere to all safety procedures as noted in the specification book. The membrane does not need to be cleaned with alcohol.

4.03 GRANULATED S.B.S AND A.P.P MODIFIED BITUMEN

As described above in section 4.01, prepare the surface of the application area as described in that section. Due to the texture of the granulated surface, the ChemCurb can be applied directly to the granulated surface of the membrane. It is not required to clean the surface of the membrane with denatured/rubbing alcohol. Due to poor granule adhesion, 1-Part Pourable Sealer should be used exclusively when installing ChemCurbs on any granulated membrane.

NOTE: APPLY A VERY THIN BEAD OF M-1 STRUCTURAL SEALANT TO THE OUTSIDE BASE OF THE CHEMCURB AND TOOL IT SMOOTH, MAKING SURE TO SEAL ALL VOIDS AND GAPS. IT IS RECOMMENDED THAT A BEAD OF 1-PART POURABLE SEALER (APPLIED FROM 28 OZ. TUBE) BE APPLIED OVER TOP OF THE BEAD OF M-1. THE 1-PART POURABLE SEALER WILL HELP OBTAIN PROPER GRANULE ADHESION.

4.04 EXISTING GRAVEL-SURFACED ASPHALT AND COAL TAR BUILT-UP ROOFS

Remove all surface contaminants as described in Section 4.01, and spud the gravel surface smooth until the top felt plies are exposed. It is very important to remove all roof cement, coatings or restorations that may have been applied to the application area. Sweep, vacuum or brush away all dust dirt and debris. The ChemCurb can now be applied to the prepared surface.

4.05 EXISTING SMOOTH SURFACED ASPHALT BUILT-UP ROOFS

Remove all surface contaminants as described in Section 4.01. In addition to the top mopping of asphalt, many of these roofs can also be coated with aluminum coating, cold emulsions, acrylic or urethane coatings etc. If any of these products exist on the application area, remove them by scraping and/or using a wire brush. All such coatings must be removed.

4.06 PENETRATIONS INSIDE THE CHEMCURB

With a wire brush and scraper, thoroughly clean and remove all loose roof cement, mastics, coatings, scaled rust and caulking that may be adhered to the penetrations inside the ChemCurb. If any fresh roof cement is present, it must be removed completely. These products act as a contaminant and will adversely affect the bonding of the new sealant that will be applied. As an additional precaution, apply M-1 Structural Sealant around the penetration starting at the base of the penetration. Tool the M-1 smooth around the entire circumference of the penetration(s), extending a minimum of 3" above the roof surface, or beyond the point where any mastics or sealants may have been previously applied. Tool the M-1 smooth to an approximate thickness of 1/8".

NOTE: DO NOT PRIME ANY PENETRATIONS INSIDE THE CHEMCURB WITH ASPHALT PRIMER. THIS CAN ADVERSELY AFFECT THE BONDING PROPERTIES OF THE NEW SEALANT.

4.07 WET ROOF INSULATION

If wet roof insulation is discovered in the application area, it must be removed in such a sufficient area, that dry insulation is encountered. New roof insulation of like kind and thickness must be installed in the application area. If the ChemCurb is being installed on a warranted roof, the manner of attachment of the insulation must conform to the specifications of the manufacturer that is warranting the roof. If no such warranties exist, the new roof insulation can be adhered with ChemLink Roof Assembly Adhesive. This shall be applied at a minimum application rate of 200 square feet per gallon, (1/4" beads, 6" o.c.). Approved structural decks are; concrete/pre-cast, painted steel (22 gauge min.), 22 gauge galvanized steel (all manufacturing oils/waxes must be removed), 1/2" min. CDX plywood (supported 16" o.c.), Graham FRP.

Approved insulation/underlayment types: polyisocyanurate (1.5" minimum), Dens-Deck (1/4"-1/2"), 1.25 lb. density E.P.S. (2" minimum), high density fiberboard (1" minimum). All insulation boards shall be 4'x4'. Full size Dens-Deck boards (4'x8') can be used.

4.08 DETERIORATED DECKING

If deteriorated decking is discovered, it must be replaced with like kind and in conjunction with N.R.C.A. guidelines and manufacturer's specifications. All decking repairs shall also meet all local code requirements. After all substrate repairs have been completed, the ChemCurb can be installed.

Part 5 – APPLICATION OF THE CHEMCURB

5.01 PRIMING

In order to prevent water infiltration at the roof penetration, apply a bead of ChemLink M-1 Structural Sealant around the base of all penetrations that are inside the ChemCurb. Apply additional M-1 to the penetrations, starting at the base and extending a minimum of 3" above the roof or 1/2" above the point where previous sealants may have been installed. Tool the M-1 smooth, covering the entire circumference of the penetration(s). **DO NOT USE ROOF CEMENT!**

5.02 INSTALLATION

If necessary (on a large ChemCurb) pre-cut the ChemCurb Accessory Straights and set them in place "dry" with the ChemCurb Corners around the penetration/s to ensure a proper fit. On standard-sized ChemCurbs there will only be two pieces that will form a circle.

Hold the first section (or curved section) of the ChemCurb "flat side up", and apply a 1/4" bead of M-1 Structural Sealant to the entire bottom perimeter and an additional bead down the center of the ChemCurb section. M-1 shall also be applied to the scarf joints. Place the freshly treated section into place on the prepared surface, and press it down firmly.

Apply M-1 to the second section (or succeeding sections for large ChemCurbs) as described above. Press the sections together and down firmly. Apply additional M-1 to any voids. Neatly tool any excess M-1 that extrudes from the scarf joints.

NOTE: ALWAYS MAINTAIN A DISTANCE OF 1" BETWEEN PENETRATIONS AND THE INSIDE EDGE OF THE CHEMCURB IN ORDER TO OBTAIN A PROPER SEAL.

When the entire ChemCurb is assembled and pressed into place, a 1/4" round continuous bead of M-1 Structural Sealant shall be applied around the outside base of the ChemCurb. All joints and seams shall be tooled to a smooth finish with the applicator stick that is included with each ChemCurb case. When installing ChemCurbs on granulated membranes, a thin bead of M-1 shall be applied to the outside of the ChemCurb and tooled smooth. An additional bead of 1-Part Pourable Sealer should be applied (using 28 oz. tube), over the M-1 to ensure proper granule adhesion.

5.03 TWO-PART PRO PACK

As per mixing instructions on the ChemCurb Pro Pack, mix parts "A" and "B for a minimum of five minutes, until they become a uniform black. Pour Pro Pack pourable sealant into the ChemCurb until it is completely flush with the top of the ChemCurb. Do not apply Pro Pack if rain is expected within four hours.

5.04 1-PART POURABLE SEALER

1-Part Pourable Sealer can be used instead of Pro Pack in any Chem Curb. This product is available in 28oz. cartridges, or in two-liter pouches. This product does not require any mixing and unused portions can be sealed and used on future projects.

Due to poor granule adhesion, 1-Part Pourable Sealer should always be used in ChemCurbs installed on granulated surfaces or on any roof penetration that is subjected to extreme movement.

5.05 ROOF WITH MULTIPLE CHEMCURBS

On a roof that has many ChemCurbs to be installed, it can be faster to install the sections of several ChemCurbs and then fill them all at once. This can help reduce the possibility of having unused Pro Pack pourable sealant left in a can. Make sure all temporary seals around the roof penetrations were sealed with M-1 Structural Sealant.

NOTE: DO NOT USE ROOF CEMENT FOR TEMPORARY SEALS.

When assembling large rectangular ChemCurbs, allow the M-1 Structural Sealant to cure for a minimum of 1 hour before filling the ChemCurb with Pro Pack or 1-Part Pourable Sealer. This will prevent any of the curb sections from rupturing due to the hydrostatic pressure of the large volume of pourable sealer. ChemCurbs can be made in any size or shape using ChemCurb Straights and/or corners. There is no maximum size limit to a ChemCurb.

5.06 POSITIVE SLOPE INSTALLATION/PIPES THROUGH A VERTICAL WALL

It is imperative to maintain the 2" depth of the sealer inside the entire ChemCurb. This can be accomplished by installing the ChemCurb around the penetration according to normal installation specifications. On pipes extending through a vertical wall, it is imperative to apply the external bead of M-1 Structural Sealant around the outside base perimeter and tool it quickly. The M-1 on the bottom of the curbs sections and the external bead of M-1 will hold the ChemCurb in place.

Fill the entire ChemCurb with ChemLink's low modulus DuraLink sealant. Hand tool the DuraLink to a metal smooth finish flush with the top of the ChemCurb. If the sloped roof is a Kynar coated roof, assemble and fill the entire ChemCurb with DuraLink.

5.07 CHEMCURB 2" POLYESTER RISERS (NON-STOCK ITEM)

2" ChemCurb Polyester Risers are 12"x 12"x 2" solid straight pieces that are bonded together and adhered on top of each other with M-1 Structural Sealant. These risers are used commonly in conjunction with IRMA roof systems when the Specification requires that the roof penetration seal be visible and accessible. They can also be used for unusual roof details that require a ChemCurb higher than 2".

Seal around the base of the roof penetration with M-1 Structural Sealant and prime the roof penetration around the entire circumference with M-1 Structural Sealant, extending from the base of the penetration up 1" beyond the top of the last ChemCurb Riser.

NOTE: DO NOT USE ASPHALT PRIMER OR ROOF CEMENT.

Cut the straight sections to the appropriate length and assemble a rectangle around the roof penetration(s). Maintain a space of 1" from the roof penetration to the inner wall of the ChemCurb Riser. Safety glasses shall be worn while cutting all ChemCurb components. Position the pre-cut sections around the roof penetration dry, to ensure a proper fit. All four sides can be stacked vertically without staggering the corners with the adjacent side.

Apply a 1/4" bead of M-1 Structural Sealant to the bottom and to the ends of each riser section as described in Section 5.02. When the first course of risers has been adhered in M-1 Structural Sealant, apply an additional bead of M-1 Structural Sealant to the inside base of the ChemCurb Riser. This will prevent leakage of the pourable sealant.

Continue to adhere the courses of ChemCurb Risers on top of each other, pressing the sections down firmly onto each other. Hand tool any excess M-1 Structural Sealer that extrudes from the inside and outside edges. Apply additional M-1 Structural Sealant to any voids on the outside joints and tool smooth.

When the last course of risers has been adhered in place, apply a bead of M-1 Structural Sealant to the four inside corners and tool the bead smooth and firmly into place, making sure that all voids are sealed. These sealant beads can also be applied in phase while the riser courses are set in place.

As described in Section 5.02, apply a bead of M-1 Structural Sealant around the entire outside base perimeter and tool it smooth making sure there are no voids. Due to additional hydrostatic pressure from the pourable sealer due to height of ChemCurb, allow M-1 Structural Sealant to cure a minimum of three hours before filling. If possible, allow assembled ChemCurb to cure overnight.

Due to the excessive height of the ChemCurb, only Pro Pack two part pourable sealer shall be used. Mix the Pro Pack as described in Section 5.03. Fill entire ChemCurb flush with the top with Pro Pack. Do not use any filler to take up space.

NOTE: DO NOT APPLY PRO PACK IF RAIN IS EXPECTED WITHIN FOUR HOURS.

PART 6 - 10 YEAR LIMITED MATERIALS WARRANTY

When applied in accordance with the Chem Link application instructions using only Chem Link materials, Chem Link, Inc. warrants its ChemCurb System against leaks for 10 years from the date of installation.

Our liability under this warranty, and buyer's sole and exclusive remedy, will be to provide replacement product free of charge. Chem Link, Inc.'s total liability for sale of this product shall in no event exceed the original cost of the product. Chem Link, Inc. shall not be liable for: cost of labor to apply the product; damage to roofing, other structures, or interior contents of buildings; or for any other damages, whether direct, incidental, or consequential.

This warranty is in lieu of all other warranties, expressed and implied, including the warranties of merchantability and fitness for a particular purpose and warranties in tort. Chem Link, Inc. also disclaims any liability under any non-warranty theory of liability, including, but not limited to contractual, tort, or liability.

Neither the scope of the warranty nor liability there under may be extended except in writing executed by a duly elected officer of Chem Link, Inc. of Schoolcraft, Michigan.

PART 7 – EXISTING ROOF WARRANTIES

When installing ChemCurbs on an existing roof, it is necessary to find out if there is a contractor or manufacturer's warranty in force on the roof. Installing a ChemCurb without prior authorization from the building owner, contractor, or roofing manufacturer, could void any warranties that have been issued on the roof area. Proper authorization is required prior to the installation of ChemCurbs on all existing roof systems.

PART 8 – POLICIES

Chem Link reserves the right to change or modify, at its discretion, and without prior notice, any of the specifications, requirements, or information in the preceding text. This revision of 1/3/06' supersedes all literature, catalogs and previous manuals.

Chem Link, as a manufacturer, is not involved in the design or construction of buildings or structures. Chem link will not accept responsibility for the performance of its products when damage is caused by: construction faults, defects in workmanship, improper building design, including but not limited to, excessive expansion or defective structural decking. Chem Link is also not responsible for any interior damages caused by water leakage into the building.

The design responsibility remains with the consultant, engineer, architect, contractor, or building owner. The guidelines described herein are solely for guidance purposes. These guidelines should not be considered all-inclusive.

END OF SECTION