

Technical Data Guide Polyether Technology CSI Section No. 07 92 13

Chem Link Inc.

Telephone: 800-826-1681
 Fax: 269-679-4448
 353 East Lyons
 Schoolcraft, MI 49087
 www.chemlinkinc.com

Last Revision: 09/14/09

Product Description

M-1 is a moisture curing, polyether adhesive/sealant designed for application in damp, dry, or cold climates. **M-1** is solvent free and contains no isocyanates. **M-1** will not shrink upon curing, will not discolor when exposed to UV light, and can not “out-gas”, or bubble, on damp surfaces as urethane sealants often do. **M-1** has resilient “elastomeric” properties and excellent adhesion to most construction materials. **M-1** is capable of joint movement in excess of 25% in both compression and extension. **M-1** can be used effectively in many difficult construction site conditions and it cures in wet or dry climate conditions and at low temperatures (30° F).

Applicable Performance Standards

- ASTM C-920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A, and O
- Federal Specification TT-S-00230-C Type II, Class A
- Corps of Engineers CRD-C-541, Type II, Class A
- Canadian Standards Board CAN 19, 13-M82
- AAMA 802.3-08 Type II, AAMA 803.3-08 Type I, and AAMA 805.2-08 Group C.

Regulatory Compliance

- Conforms to OTC Rule for Sealants and Caulks
- Meets requirements of California Regs: BAAQMD, CARB and SCAQMD
- Conforms to California Proposition 65
- Conforms to USDA Requirements for Non-food Contact

Green Standards:

- LEED 2009 for New Construction and Major Renovations: Low Emitting Materials (Section 4.1) 1 Point
- NAHB Model Green Home Building Guidelines: 5 Global Impact Points
- VOC Content at 240° F: less than 20 grams/liter (including water), ASTM D2369, EPA Method 24



Advantages

- Solvent free, 100% solids, will not shrink
- Non-slump, applies vertically and overhead
- 20 minute skin over, resists dirt pick up
- No outgassing on damp surfaces
- Very good color stability, will not suntan
- Paintable within 24 hours (See limitations)
- Gun grade, no special tools or mixing required
- Can be applied at temperatures as low as 30° F.

Colors

White	Gray	Limestone
Black		

* Color matching is available in batch quantity only

Packaging

- **10.1 oz (300 ml)**
24 cartridges/carton, 45 cartons/pallet
- **20 oz (825 ml)**
12 sausages/carton, 45 cartons/pallet
- **4 oz Squeeze Tube**
24 tubes/carton, 94 cartons/pallet
- **5 gallon pails and 50 gallon drums available by special order**



Joint Preparation

Joint surfaces should be clean, dry and free from all contamination including: dirt, oils, grease, tar, wax, rust and any other substance that may inhibit the sealant's performance.

Joint Design

Install all joint applications per ASTM and SWRI recommendations and guidelines. Joints shall be designed with a depth to width ratio of 1:2 (joint depth one-half the width). Control the depth of the sealant by using a polyethylene backer rod that is 25% larger than the joint opening at standard temperature. To prevent three-point adhesion use a backer rod or bond breaker tape to ensure proper joint movement and a long lasting weatherproof seal. Where the joint configuration will not permit a backer rod, Chem Link recommends that an alternative bond breaker be used.

Joint Width Inches (mm)	Joint Depth Inches (mm)
1/4 - 1/2 (6-13)	1/4 (6)
1/2 - 3/4 (13-19)	1/4 - 3/8 (6-10)
3/4 - 1 (19-25)	3/8 - 1/2 (10-13)
1 - 2 (25-50)	1/2 (13)

Basic Uses
Expansion Joints
Pre-cast Concrete
Block and Masonry
Curtain Walls
Window and Door frames
Siding
Parapets
Cove Joints
Transportation
Weather Sealing

Typical Uncured Properties	
Gun grade	Zero Slump ASTM C 697
Viscosity	800,000+ cps Brookfield RVF, TF spindle, 4 RPM, 73° F
Tack free time	20 minutes ASTM C-679
Odor	Mild Mint Smell

Typical Cured Properties		
Elongation at break	400 - 550%	ASTM D-412
Hardness Shore A	45 +/- 3	ASTM C-661
Shear strength	400 PSI	ASTM D-1002
Low temperature flex	Minus 10° F pass ¼ inch mandrel	ASTM D-816
Shrinkage	No measurable shrinkage after 14 days	
Service temperature	Minus 40° F to 200° F continuous service	
Shelf life	Cartridges/Sausages: 1 year Squeeze Tubes: 1 year Pails: 3 months	

Compatible Substrates*
EPDM and SBS Mod Bit
Aluminum and Galvanized Metal
Engineered Plastics, PVC
Glass
Fiberglass FRP
Wood
EIFS
Block and Brick
EPS Foam
Concrete and Stone

***Test and evaluate to ensure adequate adhesion.**

Application Guidelines

Concrete

Prior to application remove any residual contamination by mechanical abrasion, sand blasting or power washing. On green concrete, remove all release agents, friable and loose concrete. Dry all visible and standing water prior to applying **M-1**. Install an appropriate backer rod to avoid three-point bonding.

Metal

Prepare all metal to ensure maximum adhesion. Remove all rust, scale and residue by wire brushing to a bright metal sheen. Remove films, loose or inappropriate coatings and oils with an appropriate solvent such as alcohol.*

**Chem Link recommends that coated substrates be tested for adhesion prior to starting a project. Please contact Technical Services for specific application guidelines and recommendations.*

Wood

Wood should be clean, sound and dry prior to sealant application. Allow treated wood to weather for six months prior to application. Remove all coatings and paint (or test for compatibility) to ensure proper bonding. Do not use on fire retardant lumber.

Priming

In most instances **M-1** will not require a primer. However, certain applications or substrates may require a primer to ensure a long lasting bond and weatherproof seal. It is the applicator's responsibility to determine the need for a primer. Chem Link recommends a primer be used for any application where prolonged immersion is anticipated.

Storage

Store original, unopened containers in a cool, dry area. Protect unopened containers from water, heat and direct sunlight. Elevated temperatures will reduce shelf life. **M-1** will not freeze.

Shelf Life

One year from date of manufacture when stored in normal environments. High temperature and high relative humidity may significantly reduce shelf life. Pails and special orders have a shelf life of three months.

Application Instructions

Remove all dirt, oil, loose paint, frost and other contamination from all working surfaces with alcohol. DO NOT USE petroleum solvents such as mineral spirits or xylene. Maintain **M-1** at room temperature before applying to ensure easy gunning and leveling. Test and evaluate to ensure adequate adhesion. Carefully gun the sealant with a smooth, continuous bead. If tooling is needed, do so within fifteen minutes of application. Do not use on Hypalon membranes. On TPO, use Chem Link TPO primer. On smooth APP, torch apply a granulated APP target piece around penetration(s) before installing **ChemCurbs**. Do not prime bonding surfaces with asphalt primer! Do not use asphalt cement as a "night sealant."

Clean-Up

Wet sealant can be removed using a solvent such as alcohol. Cured **M-1** can be removed by abrading or scraping the substrate.

Caution

Avoid prolonged contact with skin. Uncured adhesive irritates eyes. In case of contact with eyes, immediately flush with water. Call a physician. Please refer to the MSDS for First Aid information. Most current MSDS can be found at www.chemlinkinc.com.

KEEP OUT OF REACH OF CHILDREN.

Limitations

- In areas where prolonged chemical exposure is anticipated, contact Technical Services for recommendations.
- Allow treated wood to "cure" for six months prior to application per APA guidelines.
- Do not use in areas subject to continuous immersion.
- Do not store in elevated temperatures.
- Remove all coatings and sealers before application.
- Do not apply at temperatures below 30° F.
- Test and evaluate all paints before application. Alkyd and oil based paints may dry slowly.
- Do not use on TPO without Chem Link TPO primer.



CHEM LINK



Advanced Architectural Products

Contractor Driven

Contractor Hot Line
800-826-1681

www.chemlinkinc.com

A Complete Product Line of Adhesives and Sealants

- ☀ High Performance
- ☀ ZERO Solvents
- ☀ Odor FREE
- ☀ Non-Flammable
- ☀ Non-Toxic
- ☀ Non-Polluting



Notes :

Read and ensure that the most up-to-date MSDS and technical guidelines are being followed. Proper use and application are the responsibility of the applicator. Direct any questions to Technical Services at 800-826-1681 prior to starting the project.

IMPORTANT NOTICE

Except where prohibited by law, Chem Link makes no warranties, expressed or implied, statutory or otherwise, including but not limited to, any implied condition or warranty of merchantability or fitness for a particular purpose. User is responsible for determining whether this Chem Link product is fit for a particular purpose and suitable for user's method of application.

LIMITATIONS OF REMEDIES AND LIABILITY

If this Chem Link product is proved to be defective, the exclusive remedy at Chem Link's option shall be to refund the purchase price of or to repair or replace the defective Chem Link product. Chem Link shall not otherwise be liable for loss of damages, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including negligence, warranty or strict liability.

CHEM LINK 
Advanced Architectural Products
Contractor Driven

Contractor Hot Line

800-826-1681

www.chemlinkinc.com