



## **NOVALINK SL™ SELF-LEVELING CONSTRUCTION SEALANT**

### **DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

#### **SECTION 07 92 00 JOINT SEALANTS**

#### **SECTION 07 92 13 ELASTOMERIC AND NON-ELASTOMERIC SEALANT**

### **PART 1 - GENERAL**

#### **1.01 SUMMARY**

- A. This specification describes the sealing of horizontal concrete, curb, and pavement joints. Materials include a one-component, low modulus, self-leveling, elastomeric Polyether sealant.
- B. Related Sections:
  - 1. Section 033000 – Cast-In-Place Concrete
  - 2. Section 042000 – Unit Masonry
  - 3. Section 079513 – Expansion Joint Cover Assemblies
  - 4. Section 321216 – Asphalt Paving
  - 5. Section 321313 – Concrete Paving

#### **1.02 SYSTEM DESCRIPTION**

- A. Design Requirements:
  - 1. Design number of joints and joint widths for maximum of plus or minus 25 percent movement.
  - 2. Design depth of sealant to be 1/2 width of joint.
    - a. Maximum Depth: 1/2 inch (38 mm).
    - b. Minimum Depth: 1/4 inch (6 mm).
    - c. Maximum recommended width: 2 inches (38 mm).
- B. Performance Requirements: ASTM C 920 Type S, Grade P, Class 25, Use T<sub>2</sub>, NT, and M.

#### **1.03 SUBMITTALS**

- A. Comply with Section 013300.
- B. Product Data: Submit a minimum of 2 sets of manufacturer's technical bulletins and MSDS on each product.
- C. Submit applied color samples for approval to all parties
- D. Submit laboratory tests or data validating product compliance with performance criteria specified.

#### **1.04 QUALITY ASSURANCE**

- A. Comply with Section 01 40 00.
- B. Manufacturer Qualifications: Company regularly engaged in manufacturing and marketing of products specified in this Section.
- C. Installer Qualifications: Qualified to perform Work specified by reason of experience or training provided by product manufacturer.
- D. Mock-Ups:
  - 1. At start of Project, perform mock-up of required sealant. Perform minimum of 1 mock-up for each of the substrates to be sealed.
  - 2. Coordinate mock-up areas with General Contractor and Architect.
  - 3. Install mock-ups and test in presence of sealant manufacturer's authorized representative and Architect to assure installation procedures are consistent with warranty requirements.
  - 4. After sealant has achieved sufficient cure as coordinated with manufacturer's representative, conduct adhesion pull-tests, or non-destructive testing, at discretion of Architect. Conduct tests per ASTM C1521.
    - a. Confirm results of adhesion tests as acceptable by Architect, Owner or Owner's representative, and sealant manufacturer prior to proceeding with Work. Leave approved mock-ups in place to establish standards and guidelines for acceptable installation of sealant Work and acceptable appearance.

#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Comply with Section 01 60 00.
- B. Deliver products in original factory packaging bearing identification of Provide Material Safety Data Sheets for each product. All materials must be delivered in original, unopened containers with the name of the product, manufacturer, and batch number. Damaged material must be removed from the site immediately.
- C. Condition the specified product as recommended by the manufacturer.
- D. Handle products with appropriate precautions and care as stated on Material Safety Data Sheet.

#### **1.06 PROJECT CONDITIONS**

- A. Do not use products under conditions of precipitation, or in inclement weather. Verify that substrates are clean, and frost-free. Use appropriate measures for protection to ensure proper curing conditions per manufacturer's recommendations.



## **1.07 WARRANTY**

- A. Include coverage for replacement of sealant materials which fail to achieve water tight seal, exhibit loss of adhesion or cohesion, or do not cure, provided sealant has been installed per manufacturer's recommendations for a period not to exceed five years.
- B. Warranty Exclusions: Failure resulting from excess movement, concrete shrinkage, structural cracks or defects, faulty construction, faulty design, faulty materials (other than joint sealants), improper installation, misuse of structure, settlement, or accident, fire, or other casualty or physical damage.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Novalink SL, as manufactured by CHEM LINK Inc. 353 E Lyon St, Schoolcraft, MI 49087, Direct line 269-679-4440, is considered to conform to the requirements of this specification.
- B. Customer Service 800-826-1681
- C. Technical Service 800-826-1681
- D. All substitutions must be approved in writing by architect, engineer and building owner prior to acceptance.

### **2.2 MATERIALS**

- A. Polyether sealant: The joint sealant shall be a 100% solid one-component, gun grade, non sag, polyether base material. It shall be applicable in, vertical, and overhead joints. The sealant shall cure under the influence of atmospheric moisture to form an elastomeric joint material.
- B. Any primers, as required, recommended by the manufacturer of the specified product, approved by the engineer and or manufacture.
- C. Backer rod or bond breaker tape, as approved by the manufacture and engineer.
- D. Materials shall comply to: ASTM C920, Type S, Grade NS, Class 25, Use T<sub>2</sub>, NT, M, A, G, and O; Canadian Specification CAN/CGSB-19.13-M87, Classification C-1-40-B-N and C-1-25-B-N, No. 81028.
- E. USDA compliant for non-food contact

## 2.3 PERFORMANCE CRITERIA

- A. Properties of fresh material
  - 1. Initial Cure (Tack-Free Time) ASTM C-679: <2 hours
  - 2. Consistency: self-leveling
  - 3. Color: As Specified
  
- B. Properties of the cured polyurethane sealant:
  - 1. Tensile Properties (ASTM D-412) at 21 days Self-Leveling
    - a. Tensile Strength at break: minimum 120 psi
    - b. Elongation at Break: minimum 350%
  
  - 2. Shore A Hardness (ASTM D-2240) at 21 days:
    - a. Self-leveling: 15 +/-3
  
  - 3. Adhesion in Peel (ASTM C-794)
  - 4. Service Range: -40°F to 200° F (-40° C to 93° C)
  - 5. Joint Movement (ASTM C-920): +/-25%
  - 6. The sealant shall be non-staining.
    - a. Final Cure: 7 to 10 days

## 2.4 COLOR

- A. Sealant Colors: Selected by Architect from manufacturer's color Chart.
  - 1. Color:
    - a. Gray.
    - b. Stone.
    - c. Black.
    - d. Custom colors as approved

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Comply with Section 01 70 00.
- B. Inspect areas involved in Work to establish extent of Work, access, and need for protection of surrounding construction.
- C. Examine joints for defects that would adversely affect quality of installation.
- D. Provide additional joint preparation, beyond that outlined in Specifications, as required by sealant manufacturer and Architect's recommendations based on mock-ups and field adhesion tests.

### 3.2 PREPARATION

- A. Remove loose materials and foreign matter that impair adhesion of joint sealant.
- B. Clean joints as required to expose sound surface free of contamination and laitance.
- C. Ensure structurally sound surfaces, dry, clean, free of dirt, moisture, loose particles, oil, grease, asphalt, tar, paint, wax, rust, waterproofing, curing and parting compounds, membrane materials, and other foreign matter.
- D. New Concrete: Remove loose material from joints by wire brushing. Sandblast surfaces in contact with form release agents. Allow fresh concrete to fully cure. Remove laitance by abrading methods.
- E. Existing Concrete: For previously sealed joints, remove existing material by mechanical means. If joint surfaces have absorbed oils, remove sufficient concrete to ensure clean surface.

### 3.3 PRIMING

- A. Where circumstances or substrates require primer, comply with the following requirements: Conduct test application to verify adhesion. Apply primer full strength with brush. Apply primer to a light, uniform coating. Porous surfaces require more primer. Do not over apply. Do not apply primer onto face of substrate.
- B. Avoid applying primer beyond joint faces. To minimize contamination of adjacent surfaces, apply masking tape before priming and remove tape before sealant has begun to thicken and set.
- C. Allow primer to dry before applying joint sealants. Depending on temperature and humidity, primer will be tack free in 15 to 120 minutes. Prime and seal on same workday.

### 3.4 INSTALLATION

- A. Back-Up Material:
  - 1. Install appropriate size backer rod, larger than joint where necessary per manufacturer's recommendations, and in manner to provide concave sealant profile.
  - 2. Where joint depth does not permit installation of backer rod, install adhesive-backed polyethylene bond-breaker tape along entire back of joint to prevent 3-sided adhesion of joint sealant.
- B. Sealant:
  - 1. Verify that temperature and moisture conditions are within manufacturer's acceptable limits. Using fresh sealant and equipment that is in proper working order, completely fill joint with sealant, filling from bottom up to avoid entrapping air.
  - 2. Product is self-leveling. Take measures to contain any excess that may overflow joint, especially in areas where joint is uneven.



### **3.5 CURING TIME**

- A. Curing of joint sealants varies with temperature and humidity. The following times assume 75° F (24° C), 50 percent relative humidity, and joints 1/2 inch (13 mm) wide by 1/4 inch (6 mm).
  - 1. Skins: Overnight or within 24 hours.
  - 2. Foot Traffic: Within 3 days.
  - 3. Full Cure: Approximately 1 week.

### **3.6 INSPECTION**

- A. During execution of Work, inspect Work to assure compliance with manufacturer's guidelines, these Specifications when they exceed manufacturer's guidelines, and good construction practice. Refer to latest revision of ASTM C1521 for test methods and frequency. Allow inspections of work and assist in testing requested by manufacturer's representative and Architect.
- B. Non-Compliant Work: If inspections reveal non-compliant Work or Work that was not installed per Specifications, and/or manufacturer requirements, remove adjacent Work until a location is reached where installation was performed properly. Assist in spot-checking of remainder of Work.

### **3.7 CLEANING**

- A. Remove uncured sealant and joint filler with xylene, toluene, MEK, or other sealant manufacturer approved cleaning agent.
- B. Remove cured sealant by cutting with sharp-edged tool.
- C. Remove thin films by abrading.
- D. Remove debris related to application of sealants from Project site per applicable regulations for hazardous waste disposal.

### **3.8 PROTECTION**

- A. Protect Work from contaminating substances and damage resulting from other construction operations or other causes so that sealed joints are without deterioration or damage at time of Project completion.

**END OF SECTION**