



DIVITION 7 – THERMAL AND MOISTURE PROTECTION

SECTION 07 92 00 JOINT SEALANTS

SECTION 07 92 13 ELASTOMERIC AND NON-ELASTOMERIC SEALANT

Notes to Specifier: This section included sealants for interior and exterior applications for both vertical and horizontal applications. This section utilizes a joint sealant schedule at the end of part three to specify the type of sealant for each joint. Edit this section first and then edit part two to include the description of each sealant product used in the schedule.

We recommend that you consult with your Soudal technical representative who can be contacted: Soudal, 350 Ring Road, Elizabethtown, KY 42701; (270) 769-3385; email: technical@soudalusa.com; www.soudalusa.com.

SECTION 07 92 13

PART 1 – GENERAL

1.1 DESCRIPTION

A. This specification describes the sealing of vertical joints/cracks with a non-sag, elastomeric, one-component, gun grade RTV sealant.

B. Related Sections

1. Section 03 30 00 – Cast-In-Place Concrete
2. Section 03 41 00 – Precast Structural Concrete
3. Section 04 21 00 – Masonry Assemblies Unit Masonry
4. Section 07 24 00 – Exterior Insulation and Finish Systems
5. Section 07 62 00 – Metal Flashing and Trim
6. Section 07 95 13 – Expansion Joint Cover Assemblies
7. Section 08 41 00 – Aluminum Entrances and Storefronts
8. Section 08 81 00 – Glass Glazing
9. Section 32 12 16 – Asphalt Paving
10. Section 32 13 13 – Concrete Paving

1.2 SYSTEM DESCRIPTION A.

Design Requirements

1. Design number of joints and joint widths for maximum of plus or minus 50 percent movement.

2. Design depth of sealant to be ½ width of joint.

- a. Maximum depth: ½ inch (13 mm)
- b. Minimum Depth: ¼ inch (6 mm)
- c. Maximum Recommended Width: 2 inches (50 mm)

B. Performance Requirements: ASTM C920, Type S, Grade NS, Class 25, Use NT, T2, M, A, G, & O

1.3 QUALITY ASSURANCE CERTIFICATION

- A. Manufacturer Qualifications: Company regularly engaged in manufacturing and marketing products specified in this section.
 - 1. Company shall be ISO 9001:2015 Certified
- B. Installer Qualifications: Installer shall be qualified to perform work specified by reason of experience or training provided by manufacturer.
 - 1. Modifications can be made based on local, state, and federal authorities having jurisdiction.
- C. Consult Safety Data Sheets for complete handling recommendations.
- D. Mock-Ups:
 - 1. At start of project, perform mock-up of required sealant work at one area of building. Install one mock-up of each different combination of substrates to be sealed. Coordinate with architect/engineer.
 - 2. Install mock-ups and test in presence of sealant manufacturers representative and/or architect/engineer to ensure installation procedures are consistent with warranty requirements.
 - 3. Test per ASTM C1521 after sealant has cured sufficiently. Coordinate with manufacturers authorized representative or architect/engineer to conduct adhesion pull-tests or non-destructive testing.
 - 4. Leave mock-ups in place to establish standards and guidelines for acceptable installation of sealant work and acceptable appearance.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged materials must be removed from the site immediately.
- B. Store products per manufacturers recommendations. Protect from freezing, damage, construction activity, precipitation, direct sunlight, and excessive heat.
- C. Do not apply to joints that have frost present.
- D. Condition product to 60°F to 70°F for use.
- E. Handle product with appropriate precautions as stated in the safety data sheet.

1.5 JOB CONDITIONS

- A. Environmental conditions: Do not apply products under conditions of precipitation, inclement weather, or freezing weather. Do not apply if conditions look imminent. Apply product with temperatures at least 32°F. B. Do not apply to joints that have frost.

1.6 SUBMITTALS

- A. Two copies of manufacturer's technical data sheet and safety data sheet (SDS)
- B. Samples
1. Color Selection: manufacturers sample beads showing all colors available.
 2. Verification: Two sets of each type and color of joint sealant required. Install joint sealant samples in ½ in wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
 3. Submit laboratory tests or data validating product performance.
 4. Installer to submit list of references from five previous projects similar in scope to the project. Include contact name and phone number of person charged with oversight of each project.

1.6 WARRANTY

- A. Provide manufacturers 5-year standard material warranty.
- B. Warranty exclusions: Failure resulting from concrete shrinkage, excessive movement, faulty materials (other than those products covered here), improper installation, settlement, accident, fire, other physical damage, faulty design, faulty construction, or other casualty.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. SoudaSil N1 is manufactured by Soudal 350 Ring Road, Elizabethtown, KY 42701 is considered to conform with requirements of this specification. Customer Service: (270) 769-3385 or orders@soudalusa.com Technical Service: (270) 769-3385 or technical@soudalusa.com
- C. All substitutions must be approved in writing by the architect/engineer and building owner.

2.2 MATERIALS

- A. SoudaSil N1 is a one-part neutral cure, medium modulus silicone sealant for typical building and construction joints.
- B. Sealant complies with the following requirements:

- a. ASTM C920, Type S, Grade NS, Class 25, Use NT, T2, M, A, G, and O
- b. Federal Specification TT-S-001543A, Type II, Class A,
- c. Federal Specification TT-S-00230C, Type II, Class A
- d. SWRI Validated
- e. AAMA 802.3, Type I, AAMA 802.3 Type II, AAMA 803.3 Type I, AAMA 805.2 Group C, AAMA 808.3
- f. CAN CGSB 19.13 MCG 2-25-A-N
- g. Service Temperature Range: -40°F - 325°F
- h. Shrinkage: None
- i. Movement Capability: +/- 25% (ASTM C719)
- j. Tensile Strength: 260 psi (ASTM D412)
- k. Elongation at Break: 500 % (ASTM D412)
- l. Boeig Slump: 0 in (ASTM D2202)
- m. Extrudability: 250 ml/min (ASTM C1183)
- n. Shore A: 27 (ASTM C661)
- o. Weight Loss after heat aging: 0.69% (ASTM C1246)
Cracking and Chalking after heat aging: None (ASTM C1246)
- p. Stain and Color Change: No staining (ASTM C510)
- q. Peel Adhesion: 25 pli (ASTM C794)
- r. Artificial Weathering (250 hours): no surface cracking (ASTM C793)
- s. Artificial Weathering (3,000 hours): no surface cracking (ASTM C793)
- t. Tack Free Time: No tack at 24 hours (ASTM C679)
- u. VOC Content: 29 g/L, less water and exempt solvents
- C. Sealant Colors: Selected by Architect from manufacturer's full color range.
 - a. Standard Colors: Limestone, Tan, Medium Bronze, Black, Gray, Aluminum Gray, Hunter Green, White, Off White, Stone, Redwood, Special Bronze

PART 3 – EXECUTION

3.1 Surface Preparation

- A. Prepare all surfaces in accordance with manufacturer's instructions.
- B. Clean joints as required to exposure sound substrates free of contamination.
- C. Remove all traces of old sealant, dust, laitance, greases, oils, curing compounds, form release compounds, foreign particles, tar, paint, wax, rust, waterproofing, and membrane materials by mechanical means (sandblasting, grinding, or wire brushing) as approved by the manufacturer and engineer.
- D. Blow joint free of dust using compressed air ensuring no oil or contaminants deposit on the surfaces to be sealed or brush the joint to expose a clean surface.

3.2 Priming

- A. When substrates require primer, comply with the following.

1. Apply primer per manufacturer's instructions.
2. Allow primer to dry prior to application of sealant.
3. Prime on same day as application of sealant.

3.3 Application

A. Backing Material

1. Install appropriate size backer rod, larger than joint diameter where necessary in accordance with manufacturer's instructions, and in a manner to provide a concave sealant profile of the correct depth.
2. In instances where a backer rod is not able to be used, install adhesive backed polyethylene bond breaker tape along the entire back of the joint. Prevention of 3-sided adhesion is important.

B. Sealant

1. Adhere to all safety considerations as per manufacturer's printed literature.
2. Apply sealant according to manufacturer's instructions.
3. Verify temperature and humidity are within manufacturer's acceptable limits.
4. Joints shall be masked to prevent discoloration or application on unwanted areas, as directed by the engineer. If masking tape is used, tool joint before removing. Tape must be removed prior to initial cure of sealant. Apply tape immediately prior to application of sealant.
5. Completely fill joint with sealant, filling from bottom up to avoid entrapping air.
6. Dry tooling or wet tooling with soapy water are applicable with this sealant. Tooling shall be completed before the sealant skins over. As temperature and humidity increase, skin formation time increases.

C. Curing

1. Allow sealant to cure per manufacturer's instructions.

3.4 Inspection

A. Inspect work to ensure compliance with manufacturer's instructions, specifications, and drawings.

1. Evaluate adhesion of sealant according to ASTM C1521 – Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints.
2. Allow inspections of work and assist in testing requested by manufacturer's representative/architect/engineer.

B. Non-Compliant Work: Inspections that reveal non-compliant work shall be repaired. Remove non-compliant joints to a point where installation was correct and repair. Assist in checking the rest of the work.

3.5 Cleaning

- A. Remove uncured sealant with isopropyl alcohol or a SWIPEX wipes. Remove cured sealant mechanically.
- B. Leave finished area neat and clean with no evidence of sealant on adjacent areas.

END OF SECTION

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