

# FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT

Multi-Purpose Hybrid Silane Polyether



## PRODUCT DATASHEET

**DESCRIPTION:** Rapid Set® FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT is a single-component, multipurpose, fast curing, strong, UV stable, flexible adhesive and sealant that provides a durable elastic bond to a variety of similar and dissimilar construction materials. Its hybrid silane polyether chemistry enhances both adhesive and cohesive bond, prevents shrinkage upon cure, provides high tensile strength and flexibility, exceptional durability, and weather resistance. FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT promotes superior adhesion that outperforms the bond strength of polyurethanes, and will not foam on damp surfaces. This environmentally friendly formulation has a low VOC content, is 100% solvent free, and contains no isocyanates.

**USES:** Use FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT for a wide variety of adhesive and sealant applications, including: bonding concrete, masonry, brick, stone, plywood, expansion joints, precast concrete connections, weather sealing, windows, door frames, siding, cove joints, parapets, and other dissimilar materials. This high-performance material provides excellent adhesion to EPDM and SBS-modified bitumen membranes, aluminum, galvanized metal, steel, engineered plastics, PVC, glass, fiberglass (FRP), and EPS foam.

**ENVIRONMENTAL ADVANTAGES:** Low VOC, 100% solids, isocyanate-free products are ideal for applications where the presence of VOCs, fumes or vapors are unacceptable. These products reduce the health risks of building occupants, installers and contractors; and contribute to improved indoor and outdoor air quality. Maximum durability and service life minimizes construction waste byproducts.

**REGULATORY COMPLIANCE:** Conforms to OTC Rule for sealants and caulks. Meets Requirements of California Regulations: CARB, BAAQMD, and SCAQMD. Conforms to USDA Requirements for non-food contact.

**GREEN STANDARDS:** LEED 2.2 for new construction and major renovations: Low emitting materials (section 4.1) 1 Point. National Association of Home Builders (NAHB) model Green Home Building Guidelines: 5 global impact points. VOC Content: Less than 17 grams / liter per ASTM D2369. EPA Method 24 (tested at 240°F/ 115°C).

**SURFACE PREPARATION:** Ensure substrate is clean, sound, and free of bond inhibitors, such as grease, oil, mold, surface water, coatings and sealers. For best results, roughen surfaces with an abrasive disc or sand paper, then wipe with acetone. Tape off or protect adjacent areas.

**APPLICATION:** Apply between a minimum temperature of 35°F (2°C) and rising, and a maximum of 100°F (38°C). For best results, place adhesives between 70°F (21°C) and 80°F (27°C). Typical width to depth ratio is 2:1. Cut the end of the nozzle to match the width of the joint and insert a tool to puncture the inner foil seal. Ensure the opening size of the nozzle and foil seal are large enough to allow proper flow. Too small an opening could result in excessive back pressure leading to failure of the rear seal. Insert the cartridge into a caulking gun. Before placing, extrude material until an even color (without streaks) flows out of the nozzle. Place nozzle at bottom of joint or application area to avoid trapping air during placement; keep the nozzle in the material during application. Using constant pressure, carefully apply the sealant with a smooth continuous bead. If tooling is needed, do so within 15 minutes of application.

**CRACK/JOINT FILLING:** Place backer rod, where required, to prevent three-sided bonding. New concrete control joints and expansion joints (tooled or saw cut) must be free of contaminants, and have at least 72 hours of cure before placement.

## OVERVIEW

### Highlights:

Fast Curing: 15 minute working time, tack-free in 35 minutes, paintable in 1 hour

Excellent bonding to dissimilar materials. Adheres to dry and damp substrates

Non-foaming, no bubbling

Great for interior and exterior use. Excellent weather resistance and durability

Horizontal, vertical and overhead use

UV resistant, non-shrink

100% solids, low VOC, no odor, and no harmful isocyanates

### Conforms to:

ASTM C920, Type S, Grade NS, Class 35, Uses T1, NT, M, G, A, O, ASTM E84, Class A

Federal Specification TT-S-00230-C, Type II, Class B

Army Corps of Engineers CRD-C-541, Type II, Class B

Canadian Standards Board CAN 19, 13-M82

### MasterFormat® 2016

03 05 00 Concrete Bonding Agents, Admixtures and Adhesives

03 05 07 Adhesives for Concrete

07 01 90 Joint Sealant Rehabilitation/Replacement

07 92 13 Elastomeric Joint Sealants

09 05 00 Adhesives – Common Work Results, Finishes

99 00 00 Construction & Industrial Products

### Manufacturer:

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**CLEAN-UP:** Remove excess material using acetone and disposable paper towels or cloth rags before the material cures on placement tools and adjacent surfaces. Dispose of waste material in compliance with local regulations.

**CURING:** Tack-free in 35 minutes; paintable in 1 hour at 1/4" at 70°F (21°C), 50% relative humidity.

**COLD WEATHER:** Installation in low temperatures will extend cure times of the Rapid Set® FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT. To ease flow and placement in cold conditions, warm and keep the sealant at 70°F (21°C) 24 hours prior to installation. Remove dew, frost or ice from the substrate with acetone on a clean cloth and place sealant immediately.

**WARM WEATHER:** Installation in warmer temperatures 80°F to 100°F (27°C to 38°C) will not adversely affect sealant performance. Warmer temperatures will decrease viscosity and shorten cure time.

**PACKAGING:** Available in single-component, 10.1 fl. oz. (299 mL) cartridge.

**COLOR:** Gray.

**COVERAGE:** 10.1 fl. oz. (299 mL) yields 18.2 in<sup>3</sup> (298.2 cm<sup>3</sup>).

| 10.1 FLUID OUNCE (299 ML) COVERAGE RATE |                           |
|---|---------------------------|
| Adhesive Bead, Inches                   | Linear Feet Per Cartridge |
| 1/8" (3 mm)                             | 96' (29 m)                |
| 1/4" (6 mm)                             | 24' (7 m)                 |

**SHELF LIFE:** Rapid Set® FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT has a shelf life of 18 months from the date of manufacture when properly stored.

**STORAGE:** Store in original, unopened container in a cool, dry area. Protect unopened container from water, heat and direct sunlight. Store at 40°F to 90°F (4°C to 32°C). Elevated temperatures will reduce shelf life.

**LIMITATIONS:** Do not apply greater than 1" (25 mm) width and 1/2" (13 mm) depth. Do not use in continuous immersion applications. Allow treated wood and asphalt to cure for six (6) months prior to application of Flexible Construction Adhesive & Sealant. Do not apply on frozen substrates. Test and evaluate all paints and coatings before applying to FLEXIBLE CONSTRUCTION ADHESIVE & SEALANT. Polyurethane and oil-based paints may dry slowly. Not approved for use with Exterior Insulation and Finish Systems (EIFS).

**USER RESPONSIBILITY:** Before using, read current technical data sheets, bulletins, product labels and safety data sheets. It is the user's responsibility to review the instructions and warnings for any CTS products prior to use.

**WARNING: AVOID CONTACT WITH SKIN AND EYES.** Can cause skin irritation, may cause an allergic reaction, causes serious eye irritation. Wear protective gloves, protective clothing, and eye protection. In case of contact with eyes rinse immediately with plenty of water and seek medical advice.

Refer to the Safety Data Sheet and [www.CTScement.com](http://www.CTScement.com) for additional safety information regarding this material.

**LIMITED WARRANTY:** CTS Cement Manufacturing Corp. (CTS) warrants its materials to be of good quality and at its option, within 18 months from date of manufacture, will replace material proven defective or refund purchase price thereof, and such replacement or refund shall be the limit of CTS's responsibility. Except for the foregoing, all warranties, expressed or implied, including merchantability and fitness for a particular purpose, are excluded. CTS shall not be liable for any consequential, incidental, or special damages arising directly or indirectly from the use of the materials.

**⚠ WARNING**  
CANCER and REPRODUCTIVE HARM - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## TYPICAL PHYSICAL DATA

### 7 Days at 70°F (21°C)

|                                   |  |
|-----------------------------------|--|
| Color                             | Gray   |
| Stain and Color Change, ASTM C510 | No change  |
| Hardness, Shore A, ASTM C661      | 45   |
| Tack Free Time, ASTM C679         | < 35 minutes   |
| Joint Movement, ASTM C719         | +/- 35%  |
| Adhesion-in-Peel, ASTM C794       | Vinyl 55 pli<br>Concrete 36 pli<br>Glass 55 pli<br>Aluminum 55 pli                     |
| Tensile Strength, ASTM D412       | 370 psi (2.55 MPa)   |
| Tensile Elongation, ASTM D412     | 525%   |
| Tear Strength, ASTM D624          | 111 pli  |
| VOC, ASTM D2369                   | 14.8 g/l   |
| Viscosity                         | 1,200,000 cp<br>+/- 400,000 cp,<br>Brookfield RVF TF<br>Spindle, 4 RPM, 73°F<br>(23°C) |
| Shrinkage                         | None visible after 14 days   |
| Service Temperature               | -40°F To 200°F<br>(-4°C to 93°C)   |

Note: Data obtained at 70°F (21°C). ASTM Standards are current unless otherwise stated.

### VOC Compliance (Volatile Organic Compound)

Meets U.S. EPA 40 CFR 59 Subpart C & D; CARB: California Air Resource Board; LADCO: Lake Michigan Air Directors Consortium (Illinois, Indiana, Michigan, Wisconsin); MRPO: Midwest Regional Planning Organization (Illinois, Indiana, Michigan, Ohio, Wisconsin); SCAQMD: South Coast Air Quality Management District (Los Angeles, Orange, Riverside, San Bernardino Counties); and CEPA/EC: Canada Environmental Protection Agency/Environment.



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