

**FIBO**  
INTERNATIONAL

**FC-50**

**Flexible Construction  
Adhesive & Sealant**

**Hybrid Silane  
Terminated Polyether**

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# FC-50

## Flexible Construction Adhesive & Sealant

### Hybrid Silane Terminated Polyether

#### DESCRIPTION:

FC-50 is a versatile, moisture-curing, UV-stable, hybrid silane-terminated polyether sealant and adhesive, ideal for dry, damp, and cold weather conditions. Its hybrid technology delivers superior adhesive and cohesive bonding, exceptional durability, and longer lifespan compared to polyurethanes or silicones. Isocyanate-free and solvent-free, FC-50 doesn't shrink during curing, is UV-resistant, and has minimal odor, suitable for both interior and exterior applications. It cures rapidly, forming a skin in 60 minutes and allowing for painting in just 90 minutes.

- ! Horizontal, vertical & overhead application
- ! Outperforms & outlasts silicone and polyurethane
- ! Fast curing: Paint in up to 90 minutes
- ! Superior bonding, even on damp surfaces
- ! ASTM C920, Type S, Grade NS, Class 50
- ! Professional sealer
- ! Freeze thaw resistant
- ! Bonds to damp surfaces
- ! Interior/Exterior use
- ! No odor
- ! Weather and UV resistant

#### USES:

FC-50 is a versatile sealant and adhesive suitable for diverse applications including weather sealing, siding, windows, roofing, door frames, pools, cove joints, parapets, expansion joints, precast concrete connections, and more.

#### MATERIALS & SUBSTRATES:

Masonry, brick, stone, metal, aluminum, galvanized metal, EPDM and SBS- modified bitumen membranes, concrete, plywood, engineered plastics, PVC, fiberglass, tile, FRP, EPS foam, glass and more.

#### SURFACE PREPARATION:

Clean the substrate/surface thoroughly to ensure that it is sound and void of bond breakers: oil, grease, mold, surface water, coatings or sealers and loose debris. For best results, the surface should be roughened with an abrasive disc or sandpaper and then wiped clean with acetone. Use tape to protect adjacent areas.

#### APPLICATION:

Cut the end of the nozzle to match the width of the joint. Utilize a suitable tool to puncture the inner foil seal. It is imperative to ensure that both the nozzle opening and foil seal are sufficiently large to allow for adequate flow. A smaller opening may result in excessive

back pressure, potentially compromising the integrity of the rear seal. Insert the cartridge into a caulking gun. It is recommended to utilize a high-quality gun with an 18:1 ratio to facilitate smoother and more efficient flow of the sealant. Position the nozzle at the bottom of the joint or designated application area to prevent the entrapment of air during placement. Maintain the nozzle immersed in the material throughout the application process. Apply the sealant with consistent pressure, ensuring a uniform and continuous bead. Care should be taken to maintain a smooth application process. If tooling, or smoothing, of the sealant is necessary, it should be performed within 15 minutes of application. The optimal temperature range for application is between 35°F - 100°F (2°C - 38°C).

#### CRACK/JOINT FILLING:

It is advised to maintain a width to depth ratio of 2:1, ideally not exceeding 1/2" (13 mm), to ensure optimal flexibility and durability. Backer rod should be used where necessary to prevent three-sided bonding. Any new concrete control joints and expansion joints, whether tooled or saw cut, must be clean of contaminants and allowed to cure for at least 72 hours before adhering.

**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 60 minutes; paintable in 90 minutes at 1/4" at 70°F (21°C), 50% relative humidity.

**COLD WEATHER:**

Low temperature application 35°F to 60°F (2°C to 16°C) will extend cure time. To ease flow and placement, warm and keep the sealant at 70°F (21°C) 24 hours prior to application. Remove dew, frost, or ice from the substrate with acetone on a clean cloth and place sealant immediately.

**WARM WEATHER:**

Warmer temperature application 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:**

10.1 fl. oz. (299 mL) and 28 fl. oz. (828 mL) cartridges, 20 fl. oz. (591 mL) sausages, and 2-gal (7.6 L).

**SHELF LIFE:**

24 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 80°F (4°C to 27°C). Elevated temperatures will reduce shelf life.

**LIMITATIONS:**

Do not use in continuous immersion applications. Allow treated wood and asphalt to cure for six (6) months prior to application. Do not apply on frozen substrates. Test and evaluate all paints and coatings before applying. Some paints may not dry on sealant. White color will yellow with interior lighting. High rates of moisture vapor will cause bubbling.

**ENVIRONMENTAL ADVANTAGES:**

100% solids, isocyanate-free, low VOC 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 by products.

**REGULATORY COMPLIANCE:**

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

**VOC COMPLIANCE:**

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.

**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: 8 grams/liter per ASTM D2369. EPA Method 24 (tested at 240°F (115°C)).

**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 prior to use. Refer to the Safety Data Sheet and www.FIBOInternational.com for additional information regarding this material.

**Comforms to:**

ASTM C920, Type S, Grade NS, Class 50, uses T1, NT, M, G, A, and O

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-M-82

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## Specification data:

|                                       |  |
|---------------------------------------|--|
| Stain & Color Change (ASTM C510)      | No change  |
| Hardness, Shore A (ASTM C661)         | 45   |
| Tack Free Time (ASTM C679)            | 60 minutes   |
| Joint Movement (ASTM C719)            | +/- 50%  |
| 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)        | > 600%   |
| Tear Strength (ASTM D624)             | 111 pli  |
| Volatile Organic Content (ASTM D2369) | 8 g/l  |
| Gun grade                             | Zero slump   |
| Viscosity                             | 600,000 cps,<br>Brookfield<br>HADV2T, T-E Spindle,<br>5 RPM, 73°F (23°C)                 |
| Shrinkage                             | No visible shrinkage<br>after 14 days  |
| Service Temperature                   | -40°F to 200°F<br>(-40°C to 93°C)  |

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

## LIMITED WARRANTY:

FIBO International 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 FIBO International' responsibility. Except for the foregoing, all warranties, expressed or implied, including merchantability and fitness for a particular purpose, are excluded. FIBO International 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  
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Gray