

Dymonic® FC

Fast-Curing, Low-Modulus, Silane End-Capped, Polyurethane Hybrid Sealant

Product Description

Dymonic® FC is a low-modulus, one-component, moisture-cure, polyurethane hybrid sealant. Dymonic FC is formulated with proprietary silane end-capped polymer technology. Dymonic FC provides the best performance characteristics of polyurethane and silicone sealants.

Basic Uses

Dymonic FC is a durable, flexible, sealant that offers excellent performance in moving joints and exhibits tenacious adhesion once fully cured. Typical applications for Dymonic FC include expansion and control joints, precast concrete panel joints, perimeter caulking (windows, door, panels), EIFS, aluminum, masonry and vinyl siding.

Features and Benefits

Dymonic FC is fast curing with a skin time of 60 minutes and a tack-free time of 3-4 hours to significantly reduce dirt pickup. It will not green crack due to early movement and has an exceptional movement capability of $\pm 35\%$. Dymonic FC is also low-VOC, paintable and will not crack or craze under UV exposure.

Colors

Almond, Beige, Black, Anodized Aluminum, Aluminum Stone, Buff, Dark Bronze, Gray, Limestone, Off White, Redwood Tan, Stone, White, Natural Clay, Bronze and Ivory.

Packaging

10.1 oz (300 mL) cartridges; 20 oz (600 mL) sausages; 2 gal (7.6 L), 3 gal (11.4 L) and 5 gal (19 L) pails.

Coverage Rates

308 linear feet of joint per gallon for a 1/4 in. x 1/4 in. (6 mm x 6 mm) joint. For specific coverage rates that include joint size and usage efficiencies, visit our website usage calculator at www.tremcosealants.com.

Applicable Standards

Dymonic FC meets or exceeds the requirements of the following specifications:

- ASTM C920 Type S, Grade NS, Class 35, Use NT, M, A and O
- ASTM C1248
- U.S. Federal Specification TT-S-00230C Class A, Type II
- CAN/CGSB 19.13-M87

Fire-Rated Systems

FF-D-1063, FW-D-1059, HW-D-1054, WW-D-1054

Joint Design

Dymonic FC may be used in any joint designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement, but not less than 1/4 in. (6 mm).

Joint Backing

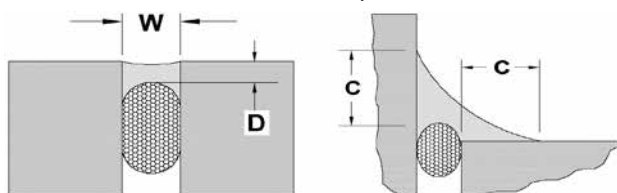
Closed cell or reticulated polyethylene backer rod is recommended as joint backing to control sealant depth and to ensure intimate contact of sealant with joint walls when tooling. Where depth of joint will prevent the use of backer rod, an adhesive backed polyethylene tape (bond breaker tape) should be used to prevent three-sided adhesion. All backing should be dry at time of sealant application.

TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Typical Value
Rheological Properties	ASTM C639	Non-sag (NS), 0" of sag in channel
Extrusion Rate	ASTM C1183	93.1 ml/min
Hardness Properties	ASTM C661	25
Weight Loss	ASTM C1246	Pass
Skin Time		1 hr
Tack Free Time	ASTM C679	3-4 hr
Stain & Color Change	ASTM C510	No visible color change/No stain
Adhesion-in-Peel	ASTM C794	Aluminum 20-25 pli (89-112N) Concrete 18-22 pli (80-98N) No Adhesion Loss
Effects of Accelerated Aging	ASTM C793	Pass
Movement Capability		$\pm 35\%$

Sealant Dimensions

W = Sealant width, D = Sealant depth, C = Contact area.



EXPANSION JOINTS - The minimum width and depth of any sealant application should be 1/4 in. by 1/4 in. (6 mm by 6 mm).

The depth (D) of sealant may be equal to the width (W) of joints that are less than 1/2 in. (13 mm) wide. For joints ranging from 1/2-1 in. (13-25 mm) wide, the sealant depth should be approximately one-half of the joint width.

The maximum depth (D) of any sealant application should be 1/2 in. (13 mm). For joints that are wider than 1 in. (25 mm) contact Tremco Technical Services or your local Sales Representative.

WINDOW PERIMETERS – For fillet beads, or angle beads around windows and doors, the sealant should exhibit a minimum surface contact area (C) of 1/4 in. (6 mm) onto each substrate. Proper joint backing or bond breaking should be provided to allow for anticipated movement.

Surface Preparations

Surfaces must be sound, clean, and dry. All release agents, existing waterproofing, dust, loose mortar, laitance, paints, or other finishes must be removed. This can be accomplished with a thorough wire brushing, grinding, sandblasting, or solvent washing, depending on the contamination.

Tremco recommends that surface temperatures be 40 °F (4 °C) or above at the time the sealant is applied. If sealant must be applied in temperatures below 40 °F (4 °C), please refer to the Tremco Guide for Applying Sealants in Cold Weather that can be found on our website at www.tremcosealants.com.

Priming

Where deemed necessary, use TREMprime Silicone Porous Primer for porous surfaces and TREMprime Silicone Metal Primer for metals or plastics. Dymonic FC typically adheres to common construction substrates without primers; however, due to the variability of substrate finishes such as Kynar and anodized aluminum, Tremco always recommends that a mock-up or field adhesion test be performed on the actual materials being used on the job to verify the need for a primer. A description of the field adhesion test can be found in appendix X1 of ASTM C1193, Standard Guide for Use of Joint Sealants.



Application

Dymonic FC is easy to apply with conventional caulking equipment. Ensure that the backer rod is friction fitted properly and any primers have been applied. Fill the joint completely with a proper width-to-depth ratio and tool to ensure intimate contact of sealant with joint walls. Dry tooling is always preferred, although xylene can be used in limited amounts to slick the spatula if needed following the initial dry tooling.

For a cleaner finish, mask the sides of the joint with tape prior to filling.

Cure Time

Dymonic FC generally cures at a rate of 3/32 in. per day at 75 °F (24 °C) and 50% relative humidity. Dymonic FC will skin in 1 hr and be tack-free in 3-4 hr. The cure time will increase as temperatures and/or humidity decrease. A good rule of thumb is one additional day for every 10 °F decrease in temperature.

Clean up

Excess sealant and smears adjacent to the joint interface can be carefully removed with xylene or mineral spirits before the sealant cures. Any utensils used for tooling can also be cleaned with xylene or mineral spirits.

Limitations

- Do not apply over damp or contaminated surfaces.
- Use with adequate ventilation.
- Do not use under polyurethane deck coatings unless the sealant is fully cured.
- Always utilize the accompanying MSDS for information on Personal Protective Equipment (PPE) and health Hazards.
- Although Dymonic FC is paintable, this does not imply adhesion to and compatibility with all paints. Please refer to Tremco Technical Bulletin No. S-09-05 for more information.

Warranty

Tremco warrants its Products to be free of defects in materials, but makes no warranty as to appearance or color. Since methods of application and on-site conditions are beyond our control and can affect performance, Tremco makes no other warranty, expressed or implied including warranties of MERCHANTABILITY and FITNESS FOR A PARTICULAR PURPOSE, with respect to Tremco Products. Tremco's sole obligation shall be, at its option, to replace or refund the purchase of the quantity of Tremco Products proven to be defective and Tremco shall not be liable for any loss or damage.

Please refer to our website at www.tremcosealants.com for the most up-to-date Product Data Sheets.