Dymonic 100

One Part, High Performance, High Movement, Polyurethane Sealant

www.tremco.com.au

DESCRIPTION

Dymonic 100 is a high performance, best in class movement, medium-modulus, low VOC, UV stable, non-sag polyurethane sealant. Formulated with an innovative polymer technology, Dymonic 100 is a highly versatile sealant that has a unique capability to adhere to damp or green concrete.

USAGE/PURPOSE

Dymonic 100 is a durable, flexible, paintable sealant that offers excellent performance in moving joints and exhibits tenacious adhesion once fully cured. Typical applications for Dymonic 100 include:

- ❑ Expansion and control joints
- ❑ Precast concrete panel joints
- ❑ Perimeter caulking (windows, doors, panels)
- ❑ Aluminium
- ❑ Masonry
- ❑ Vinyl Siding
- ❑ Sealant caulking under all Tremco liquid applied waterproofing membranes, roof membranes, and traffic coatings
- ❑ Use as fluid applied flashing in window/door rough openings

FEATURES & BENEFITS

- ❑ Can be applied on 24 hour old concrete, allowing for rapid acceleration of the construction time-frame and application of Tremco membranes/coatings.
- ❑ Best in class movement capability of +100/-50% allows Dymonic 100 to be used in a wide range of high movement expansion joints.
- ❑ Low VOC content allows Dymonic 100 to be used on Green Star projects.
- ❑ Dymonic 100 is paintable, providing the building owner maximum flexibility in the exterior façade colour.
- ❑ Jet fuel resistant allows Dymonic 100 to be used in construction/expansion joints in car parks, fuelling stations, and aviation hangers.
- ❑ Dymonic 100 has extreme UV resistance and will not crack, craze or yellow under some of the most extreme UV exposure.
- ❑ Due to innovative polymer technology, Dymonic 100 will not out gas like more traditional polyurethane sealant technology.

PACKAGING

600ml Sausages - 15 per box

COLOURS

- ❑ White
- ❑ Black
- ❑ Grey
- ❑ Aluminium Stone

SHELF LIFE

12 months when stored as recommended in original unopened packaging.

STORAGE

Store in a dry cool place in original unopened packaging.

TYPICAL PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	TYPICAL VALUES
Skin Time @ 23°C, 50% R.H.	ASTM C679	2 - 3 hours
Tack Free Time @ 23°C, 50% R.H.		6 - 8 hours
% Solids	By Volume	98%
Hardness (Shore A)	ASTM C661	40 +/- 5
Weight Loss	ASTM C1246	Pass
Stain & Colour Change	ASTM C510	Pass
Adhesion to Concrete	ASTM C794	6.13 N/mm
Adhesion to Concrete after Immersion	ASTM C794	5.25 N/mm
Adhesion to Green Concrete	ASTM C794	>4.38 N/mm
Adhesion to Damp Concrete	ASTM C794	>3.50 N/mm
Effects of Accelerated Aging	ASTM C793	Pass
Movement Capability	ASTM C719 Modified	+ 100% / - 50%
Tensile Strength	ASTM D412	2.4 - 3.1 MPa
% Elongation	ASTM D412	800 - 900%
Modulus at 100% Extension	ASTM D412	0.5 - 0.6 MPa
Tear Strength	ASTM D412	0.44 - 0.52 MPa
Smoke Development	ASTM E84	5
Flame Spread	ASTM E84	5
Fire Resistance of Assembly	NFPA 285	Pass
Crack Bridging	ASTM C1305	Pass
Nail Sealability	ASTM D1970 Section 7.9	Pass
Application Temperature		4 to 37°C
Service Temperature		-40 to 82°C

** Drying times will vary depending on ambient temperature and relative humidity*

Dymonic 100

LIMITATIONS

Dymonic 100 is not recommended for:

- ❑ Use on glass, natural rubbers such as EPDM, PVC or TPO.
- ❑ Use on bitumen will result in discolouration.
- ❑ Allow to fully cure prior to installation of nearby silicones.
- ❑ Use with adequate ventilation.
- ❑ Use in chlorinated, potable, heavy or waste water.

SUBSTRATE PREPARATION

- ❑ All surfaces must be clean, dry, sound & free from dust, oil, rust, release agents or any other contamination.
- ❑ Leave new concrete for a minimum of 24 hours after stripping formwork prior to installation of Dymonic 100.
- ❑ Metal & glass should be cleaned with Tremco Xylol. Solvent should be wiped from the surface with a clean, dry cloth.
- ❑ For plastics contact Tremco for a recommended cleaning solvent.
- ❑ When used on remedial work, all existing sealant must be removed.

PRIMING

Dymonic 100 typically adheres tenaciously to common construction substrates without primers. However, Tremco always recommends that a field adhesion test be performed on the actual materials being used on the job to verify the need for a primer. In the event that a primer is needed, use the following:

- ❑ For Porous Substrates: Vulkem 171 Primer, TREMproof 200EC Primer or TREMprime Multi-Surface Urethane Primer (MSUP).
- ❑ For Non Porous Substrates: TREMprime Non-Porous Primer.

JOINT DESIGN CONSIDERATIONS

Dymonic 100 may be used in vertical or horizontal joints designed in accordance with accepted architectural/engineering practices. Joint width should be 4 times anticipated movement but not less than 6mm.

SEALANT BACKING

- ❑ Closed cell polyethylene backing rod is recommended for horizontal joints to provide correct joint depth to width ratio, as well we prevent 3 sided adhesion. Open cell backing rod is recommended for vertical installation to allow for faster curing.
- ❑ Where depth of joint will prevent the use of backer rod, an adhesive backed bond breaker tape should be used to prevent three-sided adhesion. All backing should be dry at the time of sealant application.

METHOD OF APPLICATION

- ❑ Ensure that the backer rod is friction fitted properly or bond breaker tape has been installed and any primers required have been applied.
- ❑ Slide the sealant into the applicator gun, cut off the very end of the sealant packaging and fit the gun with the nozzle that has been cut to deliver the right bead size.
- ❑ Extrude the Dymonic 100 sealant into the joint, ensuring that no air is trapped in the joint.
- ❑ Fill the joint completely with a proper width-to-depth ratio (2:1), and tool to ensure intimate contact of sealant with joint walls.
- ❑ Tooling the sealant is recommended immediately after the application of the sealant. Dry tooling is always preferred. For a cleaner finish, mask the sides of the joint with tape prior to filling.

COVERAGE RATE

(Approximate Linear Metres per 600ml Sausage)

DEPTH	WIDTH				
	5mm	10mm	15mm	20mm	25mm
5mm	24m	12m	-	-	-
10mm	-	-	4m	3m	2.4m
15mm	-	-	-	-	1.6m

- ❑ FILLET JOINTS TRIANGULAR CROSS SECTION
  6mm x 6mm = 16
  10mm x 10mm = 6

CURE TIME

Dymonic 100 generally cures at a rate of 2.5mm per day at 24^{O}C and 50% relative humidity. Dymonic 100 will skin in 2 hours and be tack free in 6-8 hours. The cure time will increase as temperatures and/or humidity increases.

CLEAN UP

- ❑ Excess sealant and smears adjacent to the joint interface can be carefully removed with Tremco Xylol before the sealant cures.
- ❑ Any utensils used for tooling can also be cleaned with Tremco Xylol, mineral spirits or white spirits.
- ❑ Clean hands with Acetone or other mild solvent then brushing with a stiff-bristle brush. Water will accelerate the curing of the Dymonic 100.

HEALTH & SAFETY PRECAUTIONS

The Safety Data Sheet (SDS) must be read and understood prior to use.

TECHNICAL SERVICE

TREMCO has a team of Representatives who provide assistance in the selection and specification of products. For more detailed information or service and advice, call Customer Service on (02) 9638 2755 or fax (02) 9638 2955.

GUARANTEE/WARRANTY

TREMCO products are manufactured to rigid standards of quality. Any product which has been applied (a) in accordance with TREMCO written instructions and (b) in any application recommended by TREMCO, but which is proved to be defective, will be replaced free of charge.

Any information provided by TREMCO in this document in relation to TREMCO's goods or their use is given in good faith and is believed by TREMCO to be appropriate and reliable. However, the information is provided as a guide only, as the actual use and application will vary with application conditions which are beyond our control. TREMCO makes no representation, guarantee or warranty relating to the accuracy or reliability of the information and assumes no obligation or liability in connection with the information. To the extent permitted by law, all warranties, expressed or implied are excluded.

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