



Diaseal Strong

Elastomeric polyurethane joint sealant

Diaseal Strong is a one-component polyurethane sealant that polymerizes on contact with atmospheric moisture to form a flexible, durable seal for construction joints. It adapts to substrate movement with over 900% elongation, maintains elasticity down to -40°C, and provides excellent adhesion to concrete, metal, glass, polycarbonate, granite, marble, and most common building materials. Suitable for contact with drinking water after full polymerization. Non-toxic when cured. In the Decorkrete and WATstop systems, Diaseal Strong is used to seal structural expansion joints, control joints, and isolation joints before applying coatings. Ready to use — no mixing required.

Benefits

- ✓ Elastic down to -40°C — ideal for Canadian winters
- ✓ >900% elongation — moves with the joint
- ✓ Adheres to concrete, metal, glass & stone
- ✓ Safe for contact with drinking water
- ✓ Heat resistant (>60°C)
- ✓ Chemical & mould resistant
- ✓ Weathering resistant (>10 years)
- ✓ Ready to use — single component

At a Glance

Yield	See yield chart
Colour	Grey
Mixing	Ready to use
Touch Dry	1.5–2 hours
Full Cure	5 days
Polymerization	3–4 mm/day
Temp Range	+5 to +40°C
Packaging	600 cc cartridge
Shelf Life	12 months

Application Fields

Suitable for sealing expansion joints, control joints, and isolation joints in concrete, masonry, and prefabricated panel construction. In the Decorkrete microcement system, Diaseal Strong is the specified sealant for treating structural joints before applying decorative coatings. Also designed for sealing swimming pools, water tanks (including drinking water tanks), metal structures (steel, aluminium), windows, aluminium panels, irrigation channels, and joints between concrete slabs. Compatible with glass, polycarbonate, granite, and marble. For immersion applications, polymerization must occur in dry conditions before submersion. For porous or cracked concrete substrates, prime with WATstop at primer rate (1.0 kg/m²) before applying Diaseal Strong to prevent air incorporation during polymerization.

Colour: Grey.

Storage: Store in original sealed packaging in a dry, well-ventilated area, away from sunlight and frost, at +5°C to +35°C. Shelf life: 12 months. Once opened, use as soon as possible.

Preparation of the Support

The substrate must be completely hardened, dry, and structurally sound. The surface must be thoroughly clean, free of oils, greases, waxes, silicone residues, dust, and crumbling or loose material. Brush the surface if necessary to remove dust and residues. Substrate temperature must be between +5°C and +40°C. In most applications, no primer is required. On porous substrates or cracked concrete, prime with WATstop at primer rate before applying Diaseal Strong to prevent air infiltration into the sealant during polymerization.

Mixing

- Diaseal Strong is single-component and ready to use. No mixing required.

Application

1. For joints deeper than 2.0 cm, insert a neoprene backer rod. Do not puncture the outer skin of the cord — this prevents bubble formation at high temperatures. The backer rod maintains the correct depth-to-width ratio of the joint.
2. Insert the cartridge into a caulking gun, cut the tip, and extrude the product into the joint ensuring no trapped air. For wider joints, make multiple passes to ensure the sealant contacts both walls and the bottom of the joint.
3. Work the product immediately after application to tool the surface smooth.

Yield per 600 cc cartridge (linear metres):

Width / Depth	5 mm	10 mm	15 mm	20 mm	25 mm
5 mm	24	12	8	6	4.8
10 mm	12	6	4	3	2.4
15 mm	8	4	2.9	2	1.6

Drying Time

At +23°C and 50% relative humidity: touch dry in 1.5–2 hours, full cure in 5 days. Polymerization rate: 3–4 mm/day. Drying times are influenced by ambient temperature and relative humidity and can vary significantly.

Suggestions

Do not apply at temperatures lower than +5°C or higher than +35°C. During summer, apply in cooler hours of the day, away from direct sunlight. Do not apply with imminent threat of rain or frost, in conditions of strong fog or relative humidity higher than 70%. Do not apply to crumbling or dusty concrete — prime with WATstop first. On porous or cracked concrete, seal pores and cracks with WATstop before applying Diaseal Strong to prevent air infiltration into the non-polymerized sealant.

Cleaning

Clean tools with paper, then acetone or xylene. Note: Diaseal Strong cannot be cleaned with water.

Safety

Use PPE during handling and follow the product safety data sheet. SDS available from Eco-Tech Building Solutions.

Technical Data

PRODUCT PROPERTIES		FINAL PERFORMANCES	
Yield	See coverage chart	Density (23°C)	1.25 g/cm ³ — ISO 2811 / DIN 53217
Appearance	Paste	Hardness	±25 Shore A — ISO R868 / DIN 53505
Colour	Grey	Weathering Resistance	>10 years (1640 hrs) — ASTM G53 — Passed
Touch Dry (23°C)	1.5–2 hours	Elongation	>900% — DIN 52455 / ASTM D412
Full Cure (23°C)	5 days	Resistance at 100% Elongation	0.2 N/mm ² — DIN 52455 / ASTM D412
Polymerization Rate	3–4 mm/day	Thermal Resistance (100 days at 80°C)	Passed — EOTA TRO11
Application Temp	+5 to +40°C	Drinking Water Suitability	Suitable — D.M. 21/03/1973
Storage	12 months sealed	Resilience	>80% — DIN 52458
Packaging	600 cc cartridge	Adhesion to Concrete	>2.0 N/mm ² — ASTM D4541
		Toxicity	None after polymerization

Coverage Rates

APPLICATION	COVERAGE
Expansion / control joints (concrete)	See yield chart
Swimming pools / water tanks	See yield chart
Metal structures / windows	See yield chart
Glass / polycarbonate / stone	See yield chart
Prefabricated panel joints	See coverage chart

Certifications & Compliance



Disclaimer: All indications and recommendations supplied herein are stated to the best of our experience and knowledge, they should be considered as indicative only and should be confirmed by exhaustive practical applications. The applicator should carry out preliminary tests to verify suitability to the foreseen application, and in any case will take responsibility of the intended use. In case of uncertainties, contact Eco-Tech Building Solutions or Diasen's technical department. Always respect the latest update of the technical sheet available at ecotechnology.ca.

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