FX-70-6MP™

Multi-Purpose Marine Epoxy Grout

A Simpson Strong-Tie® Company

The information in this technical data sheet is valid for the S&P range of products, systems and solutions.
Please note that the information in your country may vary. Visit sp-reinforcement.eu to find your local branch.

Ref: FX706MP.TDS.EU-EN.V1

DESCRIPTION

FX-70-6MP™ Multi-Purpose Marine Epoxy Grout is a three-component, 100% solids, moisture-tolerant epoxy grout specifically designed for underwater applications as part of the FX-70® Structural Repair and Protection System.

GENERAL FEATURES

WHERE TO USE

- As a high-strength epoxy grout component of the FX-70® structural repair and protection system
- As a high-strength epoxy grout in wet or dry applications
- As an underwater repair mortar Joint repair

PERFORMANCE FEATURES

- Easily pumped or poured
- High-strength, low absorption, impact-resistant grout
- Can be placed underwater without de-watering
- Resistant to chemical and aggressive water environments

PRODUCT DATA

Generic Description
FX-70-6MP™

Packaging
FX-70-6MP™ unit with 2 bags contains:
- 9.3 kg component A
- 4 kg component B
- 2 x 25 kg component C

FX-70-6MP™ unit with 3 bags contains:
- 9.3 kg component A
- 4 kg component B
- 3 x 25 kg component C

Mixing Ratio
50–75 kg component C / 13.3 kg epoxy unit

Product Yield
Approx. 38 litre / 13.3 kg + 2 bags
Approx. 43 litre / 13.3 kg + 3 bags

Pot Life
60 min. at 20 °C

Storage
Store dry between 4–35 °C

Shelf Life
2 years in unopened packaging

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TECHNICAL PROPERTIES

FX-70-6MP	Test method	Value
Compressive strength	EN 12190	≥ 74 N/mm²
Flexural strength	EN 12190	≥ 35 N/mm²
Chloride ion content	EN 1015-17	0.01 %
Tensile strength	EN 1542	≥ 3.5 N/mm²
Tensile strength (freeze-thaw cycling)	EN 13687-1	≥ 3.3 N/mm²
Tensile strength (thunder-shower cycling)	EN 13687-2	≥ 3.4 N/mm²
Tensile strength (dry thermal cycling)	EN 13687-4	≥ 3.3 N/mm²
Carbonation resistance	EN 13295	Pass
E-Modulus	EN 13412	≥ 15000 N/mm²
Capillary absorption	EN 13412	0.0001 kg/(m²xh$^{0.5}$)
Pot life	N/A	> 1 hour (20 °C)
Hardening time underwater	N/A	Approx. 14 hours (10 °C)
		Approx. 7 hours (20 °C)
		Approx. 4 hours (30 °C)
Application temperature	N/A	8 °C–35 °C
Consumption	N/A	Approx. 38 l / 2 bag kit
		Approx. 43 l / 3 bag kit

The above texts are carried out in laboratory conditions. The tests were carried out using the 3 bag kit unless otherwise stated.

PLANNING

LIMITATIONS

- Do not apply in water temperatures below 8 °C
- Do not apply in water temperatures above 35 °C

PREPARATION

SURFACE PREPARATION

Surface must be at least 4°C prior to application. All surfaces must be sound, free of loose rust, marine growth, oil, and other contaminants. Consult a qualified professional engineer in all cases when section loss exceeds 25 percent.

Concrete: Prepare surface by high-pressure water blasting or other mechanical means. Repair or replace any reinforcing steel as determined by a qualified professional engineer.

Steel: Prepare surface by high-pressure waterjetting or other mechanical means necessary. Repair or replace any structural steel elements with excessive section loss as determined by a qualified professional engineer.

Wood: Prepare surface by high-pressure water blasting or other mechanical means necessary to achieve a sound surface, free of all contaminants.

All submerged forms should be installed by certified professional divers. All forms must be sealed appropriately to prevent grout leakage during installation.

MIXING

For optimal product performance, condition individual components to 21°C and stir liquid components thoroughly prior to use. Proportion Component “A” in a clean pail. Mix thoroughly with a low-speed (300–600 rpm) drill and mixing paddle for 2–5 minutes, scraping unmixed material from sides and bottom of mixing container as needed, taking care to prevent air entrapment. Continue mixing, and slowly add Component “C” to avoid clumping at a rate of 50–75 kg per 13.3 L unit of epoxy, scraping the sides and bottom as needed. Mix for approximately 2–3 minutes or until a uniform consistency is achieved. For large pours requiring multiple units, mix the liquid components as instructed above, then transfer the liquid to a mortar mixer and add Component “C”, mixing to a uniform consistency.

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EXECUTION

APPLICATION

FX-70-6MP™ can be trowelled, poured, pumped, or tremied. Properly mixed FX-70-6MP™ can be poured from the top of the jacket through standing water. For pumping applications, pump properly mixed FX-70-6MP™ as follows: Install pumping ports at 90 degrees from tongue and groove joint, alternating sides. Place the first port approximately 30 cm from the bottom of the jacket. Place subsequent ports at a maximum 1.5 m vertical spacing, alternating sides. Begin pumping from the lowest port and move up from port to port. Do not exceed 3 m pumping distance from any individual port. All submerged forms should be inspected by a certified professional diver during the filling process to check for leaks and proper placement. For tremie applications, make sure the hose extends all the way to the bottom of the form. Fill the form to the desired level, allowing water to displace from the top of the form. Depending on the depth of the pour and size of the vessel, the tremie hose may need to be retracted as the form fills to maintain flow.

HEALTH & SAFETY

IMPORTANT SAFETY INSTRUCTIONS

For detailed safety information, we recommend that you see the current safety data sheets which are available on www.sp-reinforcement.eu or you can contact us on +41 41 825 0070.

S&P's range of products are for industrial use. They must be installed by specialised personnel and competent professionals with adequate training. The installation instructions must be followed.

CE-MARKING

CE

This product conforms to EN 1504-3.

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