

FX-70-6MP™

Multi-Purpose Marine Epoxy Grout



A Simpson Strong-Tie® Company

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.

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

GENERAL FEATURES

PRODUCT DATA

All testing performed at 23°C and 50% R.H.

Generic Description

FX70-6MPKT3-2 contains:

- 11.4 L epoxy kit +
2 x 22.7 kg bags of filler

FX70-6MPKT3-3 contains:

- 11.4 L epoxy kit +
3 x 22.7 kg bags of filler

FX70-MPKT15-10 contains:

- 56.8 L epoxy kit +
10 x 22.7 kg bags of filler

FX70-MPKT15-15 contains:

- 56.8 L epoxy kit +
15 x 22.7 kg bags of filler

Colour

Dark tan

Mixing Ratio

Epoxy: 2A:1B

Filler: 45–68 kg per 11.4 L unit of epoxy

Product Yield

0.03 m³ for 11.4 L + 2 bag mix

0.04 m³ for 11.4 L + 3 bag mix

Pot Life

45 min. at 21°C

Storage

Store dry between 4 – 35°C

Shelf Life

2 years in unopened packaging

TECHNICAL INFORMATION

All testing performed at 23°C and 50% R.H

Mix ratio – 7.6 L Component A : 3.8 L
Component B : 45.2 kg Component C

Compressive strength

EN 12190: 1998

28 days: > 81.3 MPa

Bulk density

EN 12190: 1998

1917kg/m³

Bond strength

EN 1542: 1999

28 days: > 3.14 MPa

Shrinkage and Expansion

EN 12617-4: 2002

Bond strength after 90 days (shrinkage):

> 2.85 MPa

Bond strength after 90 days (expansion):

> 3.23 MPa

Modulus of elasticity

EN 13412: 2006

28 days: > 13.6 GPa

Capillary absorption

EN13057: 2002

Sorption coefficient:

377E-03 kg.m⁻².h^{0.5}

Chloride content soluble in water

EN 1015-17: 2000/A1: 2004-en

0.02%

All testing performed at 23°C and 50% R.H

Mix ratio – 7.6 L Component A : 3.8 L
Component B : 67.8 kg Component C

Compressive strength

EN 12190: 1998

28 days: > 91.6 MPa

Bulk density

EN 12190: 1998

2037kg/m³

Bond strength

EN 1542: 1999

28 days: > 2.95 MPa

Shrinkage and Expansion

EN 12617-4: 2002

Bond strength after 90 days (shrinkage):

> 2.95 MPa

Bond strength after 90 days (expansion):

> 3.23 MPa

Modulus of elasticity

EN 13412: 2006

28 days: > 16.7 GPa

Capillary absorption

EN13057: 2002

Sorption coefficient:

0.00E-00 kg.m⁻².h^{0.5}

Chloride content soluble in water

EN 1015-17: 2000/A1: 2004-en

0.02%



PLANNING

LIMITATIONS

- Do not apply in water temperatures below 4°C
- Do not apply in water temperatures above 32°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" and Component "B" at a 2A:1B ratio by volume in a clean pail. Mix thoroughly with a low-speed (300 – 600 rpm) drill and mixing paddle for 2 – 3 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 45 – 68 kg per 11.4 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.

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.

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.



This product conforms to EN 1504-3

IMPORTANT INFORMATION

It is the responsibility of each purchaser and user of each product to determine the suitability of the product for its intended use. Prior to using any product, consult a qualified design professional for advice regarding the suitability and use of the product, including whether the capacity of any structural building element may be impacted by a repair. As jobsite conditions vary greatly, a small-scale test patch is required to verify product suitability prior to full-scale application. The installer must read, understand and follow all written instructions, and warnings contained on the Limited Warranty, product label(s), Product Data Sheet(s), Material Safety Data Sheet(s) and the www.sp-reinforcement.eu website prior to use. For industrial use only by qualified applicators. KEEP OUT OF REACH OF CHILDREN!

S&P Clever Reinforcement Company AG
Seewernstrasse 127
CH-6423 Seewen
SWITZERLAND

Phone : +41 41 825 00 70
Fax : +41 41 825 00 75

info@sp-reinforcement.ch
www.sp-reinforcement.eu