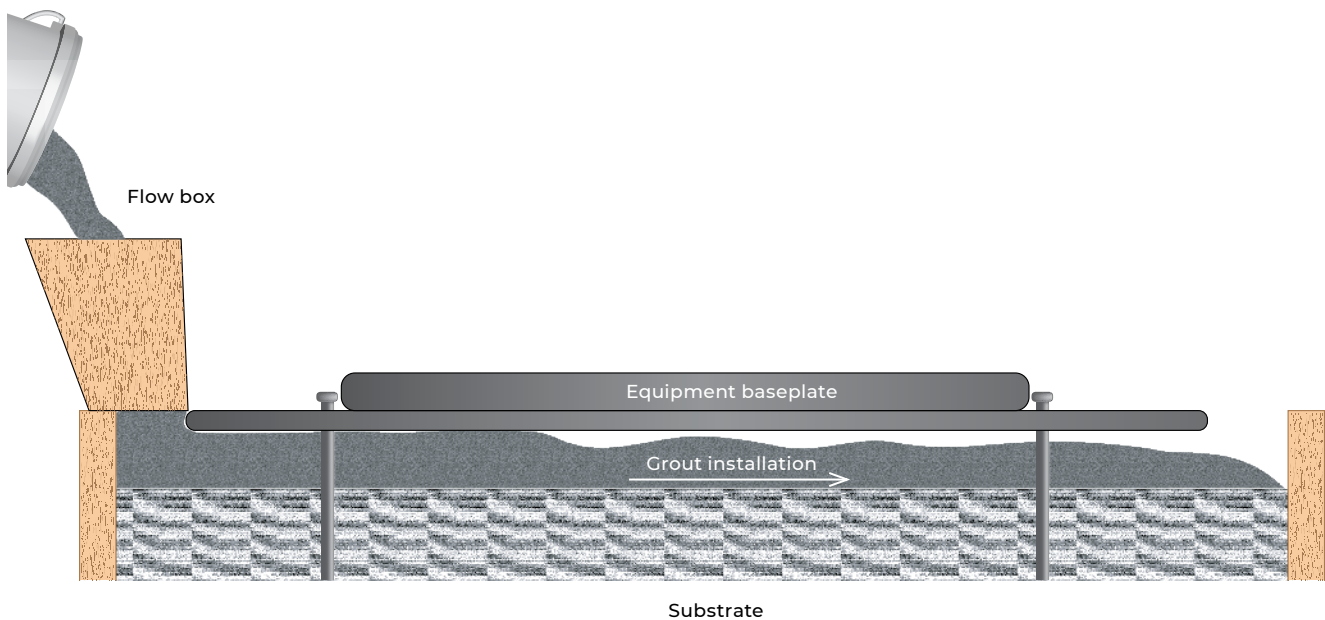


A close-up photograph showing a white plastic bucket tilted to the left, pouring a thick, dark, granular construction grout into a wooden formwork. The grout is being poured onto a metal bracket that is secured to a vertical metal post with a bolt. The wooden formwork is made of light-colored wood and is placed on a concrete surface. The background is dark and out of focus.

Construction Grouts from MAPEI

What are MAPEI's construction grouts?

MAPEI's construction grouts provide superior performance for precision grouting of heavy industrial equipment.



MAPEI's grout will easily flow underneath the equipment baseplate to help ensure proper load transfer and precision alignment. The grout's high working time and high flow ensure a high surface bearing for load transfer.

MAPEI offers both epoxy and cementitious construction grouts

	Yield	Depth neat	Working time	Initial set	Final set	Maximum extension rate	Compressive strength at 28 days
Cementitious grouts							
Planigrout 712	0.43 cu. ft. (0.0122 m ³)*	1/2" to 6" (12 mm to 15 cm)	1 hour	7 hours	9 hours	25% per weight	> 8,000 psi (55.2 MPa) +++
Planigrout 755	0.47 cu. ft. (0.0133 m ³)*	1/2" to 2-3/8" (12 mm to 6 cm)	1 hour	6 hours	7.5 hours	30% per weight	> 6,150 psi (42.4 MPa) +++
Planigrout 728	0.43 cu. ft. (0.0122 m ³)*	1/2" to 6" (12 mm to 15 cm)	1 hour	< 7 hours	< 9 hours	25% per weight	> 8,500 psi (58.6 MPa) +++
Planigrout 740	0.45 cu. ft. (0.013 m ³)**	1/2" to 6" (12 mm to 15 cm)	1 hour	< 7 hours	< 9 hours	50%, 27.5 lbs. (12.5 kg)	> 9,000 psi (62.1 MPa)
Post-tensioning cementitious grout							
Planigrout PT	0.51 cu. ft. (0.0144 m ³)*	1/2" to 2" (12 mm to 5 cm)	~ 30 min.	~ 6 hours	N/A	N/A	> 7,000 psi (48.3 MPa)
Urethane-epoxy cable grout							
Planigrout 950	0.67 cu. ft. (0.019 m ³ ***)	N/A	5 hours	16 hours	< 17 hours	N/A	N/A
Epoxy grouts							
Planigrout 310	1.62 cu. ft. (0.046 m ³)†	1/2" to 6" (12 mm to 15 cm)	2 to 3 hours	3 hours	8 hours	4 bags	> 14,500 psi. (100 MPa)
Planigrout 350	2 cu. ft. (0.057 m ³)††	2" to 18" (5 to 45.7 cm)	3 to 4 hours	4 hours	9 hours	4 bags	> 15,000 psi (103 MPa)

* Per 50 lbs. (22.7 kg) of product

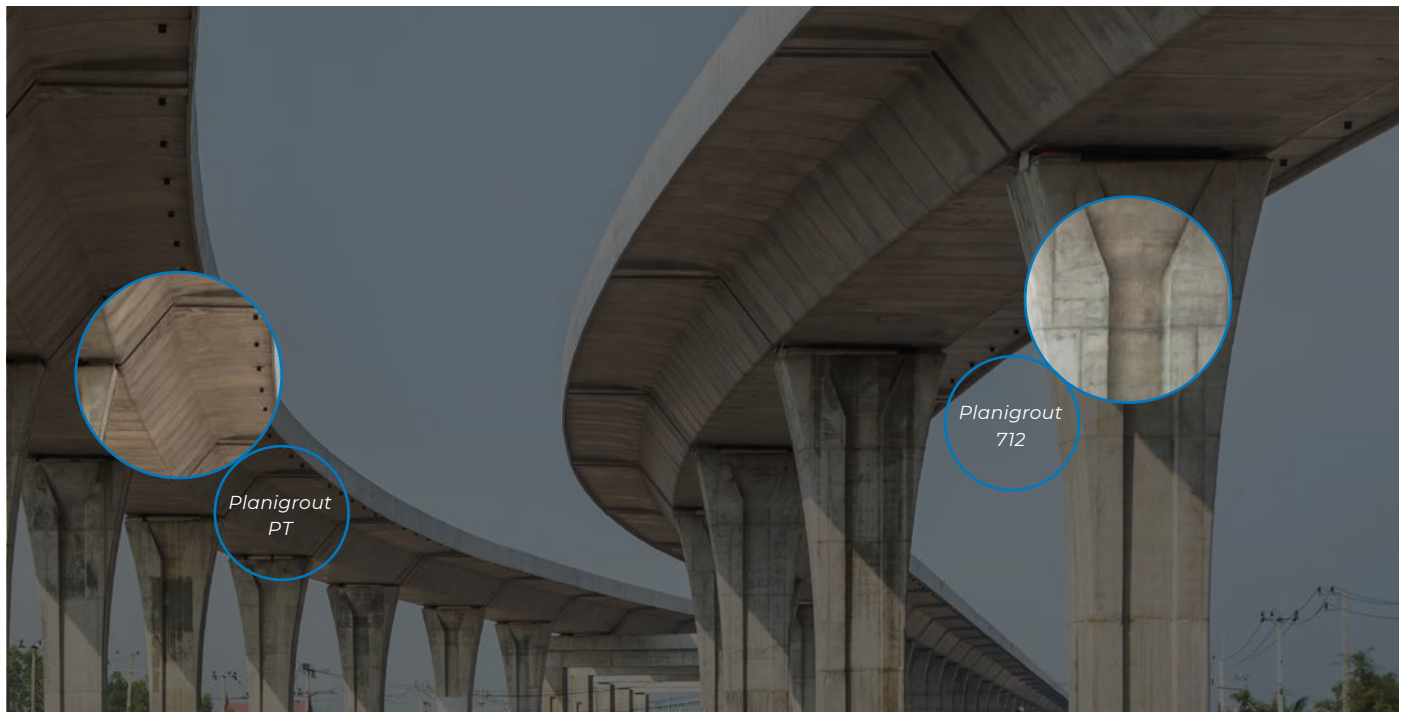
** Per 55 lbs. (24.9 kg) of product

*** Per 5 U.S. gals. (18.9 L) of product

† Per 218.6 lbs. (99.2 kg) of product

†† Per 288 lbs. (131 kg) of product

††† Flowable



Planigrout 712, Planigrout 755 and Planigrout 728

High-precision cementitious grouts

Planigrout 712

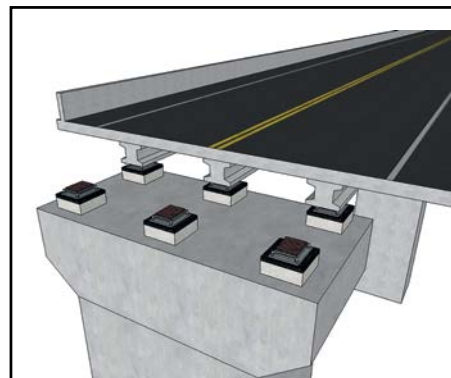
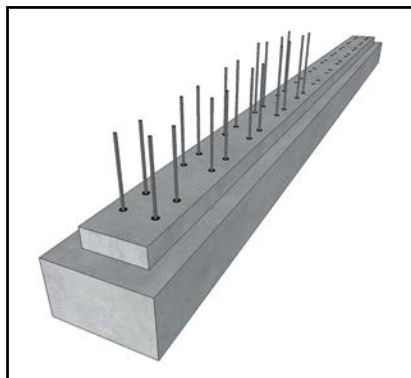
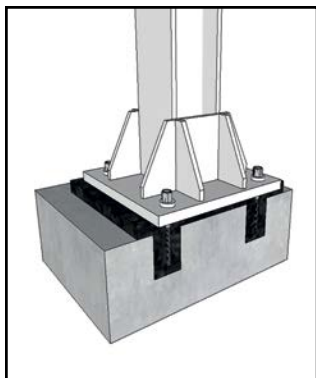
Planigrout 712 is a one-component, nonshrinking, nonmetallic, cement-based grout. Planigrout 712 contains a corrosion inhibitor and silica fume, as well as a special blend of fine aggregate and plasticizers that provide exceptional placing and performance characteristics.

Planigrout 755

Planigrout 755 is a one-component, nonmetallic, nonstaining, nonshrinking, cementitious construction grout consisting of select fine aggregates and special additives. Planigrout 755 requires only the addition of water to produce consistencies varying from dry pack to flowable.

Planigrout 728

Planigrout 728 is a one-component, nonshrink, nonmetallic, cement-based precision grout that provides high performance.



Can be mixed at a fluid, flowable or plastic consistency

Fluid application underneath a column baseplate

Planigrout 712

Planigrout 755

Dry-pack application in precast panel joint



Designation: C1107/C1107M – 14a

Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)¹

This standard is issued under the fixed designation C1107/C1107M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope²

1.1 This specification covers packaged dry, hydraulic cement grout (nonshrink) intended for use under applied load (such as to support a structure, a machine, and the like) where a change in height below initial placement height is to be avoided.

1.2 Grouts covered are composed of hydraulic cement, fine aggregate, and other ingredients. They require only the addition of mixing water for use.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.4 The following safety hazards caveat pertains only to the test method portion of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

- 2.1 ASTM Standards:²
- C109/C109M Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens)
 - C125 Terminology Relating to Concrete and Concrete Aggregates
 - C138/C138M Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
 - C157/C157M Test Method for Length Change of Hardened

- Hydraulic-Cement Mortar and Concrete
- C185 Test Method for Air Content of Hydraulic Cement Mortar
- C305 Practice for Mechanical Mixing of Hydraulic Cement Pastes and Mortars of Plastic Consistency
- C702 Practice for Reducing Samples of Aggregate to Test Size
- C827 Test Method for Change in Height at Early Ages of Cylindrical Specimens of Cementitious Mixtures
- C939 Test Method for Flow of Grout for Preplaced-Aggregate Concrete (Flow Cone Method)
- C1090 Test Method for Measuring Changes in Height of Cylindrical Specimens of Hydraulic-Cement Grout
- C1437 Test Method for Flow of Hydraulic Cement Mortar

3. Terminology

3.1 **Definitions**—For definitions of terms used in this specification, refer to Terminology C125.

3.2 **Definitions of Terms Specific to This Standard:**

3.2.1 **consistency, flowable, *n***—a grout consistency having a flow of 125 to 145 by the flow test in accordance with the applicable provisions of Test Method C1437; the flow after 5 drops of the flow table in 3 s.

3.2.2 **consistency, fluid, *n***—a grout consistency having a time of efflux of 10 to 30 s when tested by the flow cone procedure of Test Method C939.

3.2.3 **consistency, plastic, *n***—a grout consistency having a flow of 100 to 125 by the flow test in accordance with the applicable provisions of Test Method C1437; the flow after 5 drops of the flow table in 3 s.

4. Ordering Information

4.1 When the purchaser specifies that properties of the packaged, dry grout meet the requirements of this specification, also specify which, if any, of the optional requirements apply.

4.2 When the grout is to be used in contact with stressed tendons or other corrosion-sensitive, load-bearing structural members, the purchaser shall supply this information to the manufacturer and obtain assurances that the material meets relevant chloride, nitrite, nitrate, sulfide, and sulfate requirements, and any other material limitations imposed by the applicable codes and standards (see Note 1).

¹ This specification is under the jurisdiction of ASTM Committee C09 on Concrete and Concrete Aggregates and is the direct responsibility of Subcommittee C09.43 on Packaged Dry Combined Materials.

Current edition approved Dec. 15, 2014. Published February 2015. Originally approved in 1991. Last previous edition approved in 2014 as C1107/C1107M – 14. DOI: 10.1520/C1107_C1107M-14a.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

³ A Summary of Changes section appears at the end of this standard

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1

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1

Planigrout 712, Planigrout 755 and Planigrout 728 meet the requirements of ASTM C 1107 Product Specification for ASTM C1107 Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink)



Scan to view
Planigrout 712



Scan to view
Planigrout 728



Scan to view
Planigrout 755

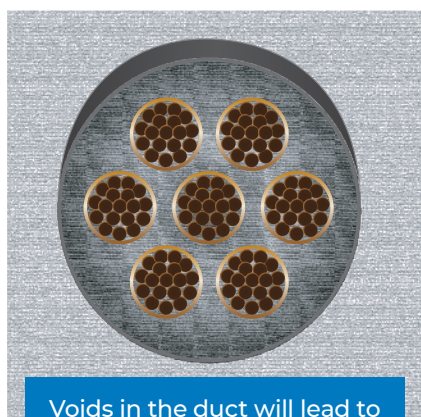
Planigrout PT

Cementitious grout for post-tensioning cable injection

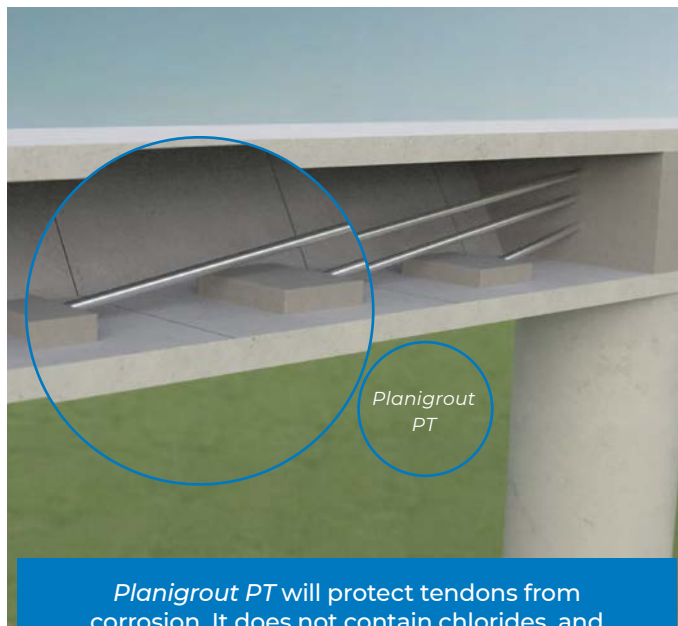
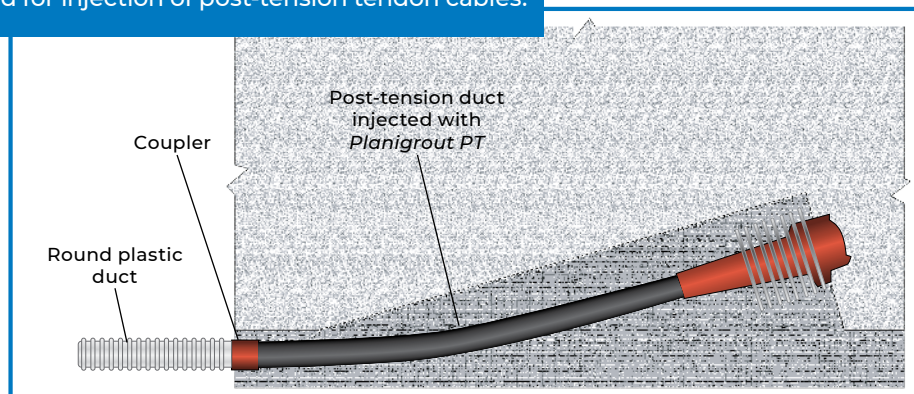
Planigrout PT is a nonshrinking, fluid, cement-based grout used to fill the annular space around post-tensioned strands in PT ducts.



Planigrout PT is specifically formulated for injection of post-tension tendon cables.



Voids in the duct will lead to corrosion of the tendons.



Planigrout PT will protect tendons from corrosion. It does not contain chlorides, and it will prevent voids from forming that could trap humidity and cause corrosion.

Planigrout 950

Epoxy-urethane injection cable grout

Planigrout 950 is a two-component, flexible, epoxy-urethane injection grout specifically developed for cable-stayed bridge applications. It is suitable for the injection of sheaths of prestressed cables, strands of suspension, and the protection of anchorage tie rods.



Cables in suspension bridges must be injected with grouts in order to protect the high-stress cables from corrosion.

Epoxy-urethane grouts have better flexibility when compared with cementitious grouts and can better tolerate high movement in cables.

Wind stress on bridge



Wind and traffic are variable cyclic loads that induce constant stress variation in cables.

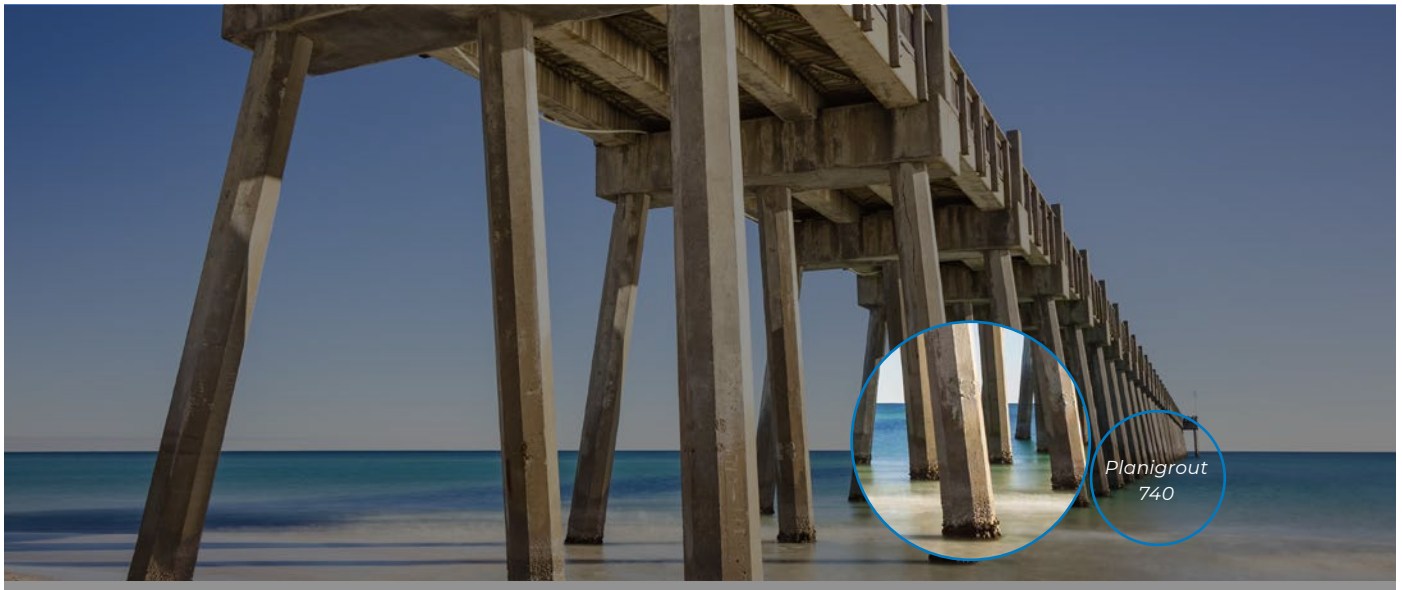
Planigrout 740

Underwater tremie grout

Planigrout 740 is a high-strength, nonshrink, cementitious tremie grout composed of select fine aggregates, special additives and silica fume for use in off-shore grouting and repair.

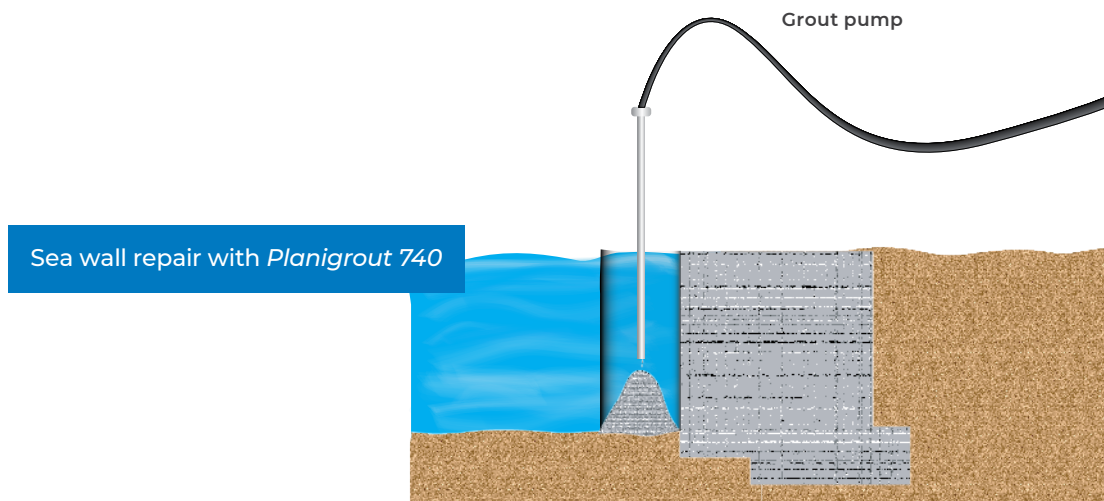
Features and Benefits

- Anti-washout additive for underwater injection
- Superior resistance to chlorides and seawater



Planigrout 740 can be used to repair sea walls, piers and other underwater concrete elements without removing water from the form.

Due to its anti-washout properties, *Planigrout 740* will displace water when injected from the bottom of the form.



Planigrout 350 and Planigrout 310

High-performance epoxy grouts

Planigrout 350

- Low exotherm for deep pour
- Thickness installation: 2" to 18" (5 to 45.7 cm)

Planigrout 350 is a high-performance epoxy grout that can be placed in deep-pour applications and where high compressive and dynamic strengths are required.



Planigrout 310

- High fluidity
- Thickness installation: 1/2" to 6" (12 mm to 15 cm)

Planigrout 310 is a high-performance epoxy grout that can be placed in precision applications that require high-flow capabilities as well as high compressive and dynamic strengths.



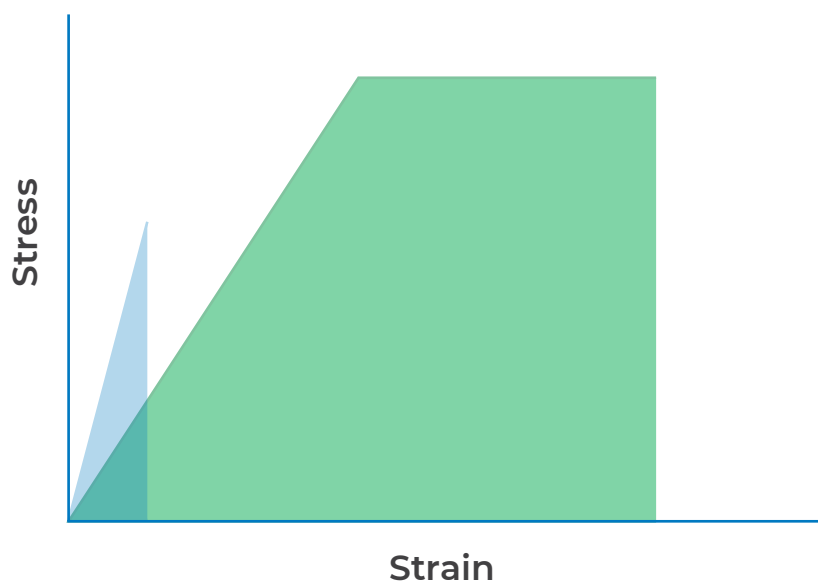
Baseplates should be level with epoxy grouts when exposed to dynamics loads such as vibration, impacts and torque.

Why? Because epoxy grouts have better toughness than cementitious grouts.



Toughness is the ability of a material to absorb energy and plastically deform without fracturing. It can be defined by the area under the stress-strain curve.

Epoxy grouts are more durable under pumps, turbines and other dynamic equipment.

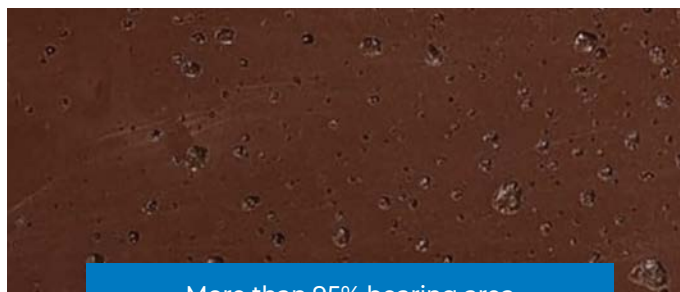


Epoxy Grouts
Cementitious Grouts

Planigrout 310 and Planigrout 350

High fluidity and bearing surface area

Easy to place underneath a baseplate; ensures effective contact with the baseplate for optimal load transfer to the foundation



More than 95% bearing area

High strength

Heavy load support and a quick return to service



Exceed 14,500 psi (100 MPa) in compressive strength at 7 days

High modulus of elasticity and creep resistance

No loss of tension in the anchors after installation



Tested per ASTM C1181 and ASTM C580

Great chemical resistance

Can be exposed to oil and other chemicals without loss of performance



Reach out to your MAPEI Technical Services representatives for a list of chemicals that our epoxy grouts have been tested for and are resistant to.



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