



# Planigrout<sup>®</sup> 728

## Nonshrink Precision Grout



### DESCRIPTION

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

### FEATURES AND BENEFITS

- High compressive strength
- Silica-fume modified
- Nonshrink
- Can be mixed at dry-pack, plastic, flowable and fluid consistencies

### INDUSTRY STANDARDS AND APPROVALS

- Meets and/or exceeds ASTM C1107 and CRD C621 standards

LEED v4 Points Contribution

LEED Points

Health Product Declaration (HPD)\* .....Up to 2 points

*\* Using this product may help contribute to LEED certification of projects in the category shown above. Points are awarded based on contributions of all project materials.*

### WHERE TO USE

- Precision grouting applications
- Grouting precast
- Base plates
- Anchor bolts
- For interior and exterior applications

### LIMITATIONS

- Do not use for depths greater than 6" (15 cm) without aggregate extension – using clean 3/8" (10 mm) pea gravel at a rate of 25% by weight.
- Do not use for extreme dynamic load applications, or where chemical resistance is required.
- Do not add other additives or cements to *Planigrout 728*.
- Ensure that *Planigrout 728* is protected from freezing after placement and until final set.
- Ensure that *Planigrout 728* is used in confined areas and not intended for concrete restoration.
- Do not use *Planigrout 728* as a repair mortar.
- Do not use damaged or previously opened bags.
- Isolate *Planigrout 728* from direct aluminum.
- Do not vibrate.
- Do not overwater material.

### SURFACE PREPARATION

- Thoroughly clean the surface of substances that could affect the bond strength of *Planigrout 728*, including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, form release agents, laitance, loose toppings, foreign substances and any other residues.
- For anchor bolt/dowel grouting, the hole diameter should be 1" (2,5 cm) greater than the bar diameter. When anchoring, degrease any anchor bolts.
- Reference ACI 351.1R or 351.2R (see "Related Documents" chart) for surface preparation and grouting procedures.



- Thoroughly wet the concrete surface (prepare to a saturated surface-dry [SSD] condition). Remove all standing water from low areas on the foundation, as well as in bolt holes.
- Ensure that the concrete substrate and ambient room temperatures are between 41°F and 95°F (5°C and 35°C) before application. Maintain temperatures within this range for at least 3 days after the placement of *Planigrout 728*. Water and material should be maintained at about 70°F (21°C).
- Ensure that *Planigrout 728* is protected from freezing after placement and that the temperature is maintained above 41°F (5°C) during and 3 days after placement.
- Protect from excessive heat and wind.
- Reference ACI C308.1 Standard Specification for Curing Concrete.

## CLEANUP

- Wash hands and tools promptly with water before the material hardens. Cured material must be mechanically removed.

## MIXING

Choose all appropriate safety equipment before use. Refer to the Safety Data Sheet for details.

1. Into a clean mixing pail, pour about 3/4 of the required amount of cool, clean potable water (see “Technical Data” table for mixing ratios). The water demand will vary depending on temperature, humidity, mixing equipment and material. Use the minimum amount of water required to achieve the desired consistency.
2. Slowly add *Planigrout 728* to water while mixing, using a low-speed mixer. Do not hand-mix *Planigrout 728*. Add as much of the remaining 1/4 of water as needed to achieve the desired consistency. Mix for up to 3 minutes, scraping down any unmixed powder after 1 to 2 minutes. Remix to a smooth, homogenous consistency.
3. Place immediately after mixing.

## PRODUCT APPLICATION

Read all application instructions thoroughly before installation. Reference ACI 351.1R or 351.2R (see “Related Documents” chart) for grouting procedures.

- 1a. Dry-pack application: *Planigrout 728* can be hand-packed and tamped into place.
- 1b. Plastic application: *Planigrout 728* may be rodded or chained into place.
- 1c. Flowable application: *Planigrout 728* may be used with a low-pressure grout pump, or poured, hand-rodded and chained into place.
- 1d. Fluid application: *Planigrout 728* meets ASTM C939 consistency requirements for easy placement with a proper box head or by pumping.
2. To facilitate the filling of hard-to-reach areas, use a wood strip, steel rod or chain.

## CURING

- Curing is recommended for 3 days after placement using wet curing, damp burlap, polyethylene sheeting or a suitable ASTM C309 curing compound.

## Product Performance Properties

Laboratory Tests	Results			
Fluidity	Dry Pack	Plastic	Flowable	Fluid
Flow table typical value (ASTM C230)	10% to 25%	100% to 125%	125% to 145%	Efflux < 30 seconds (ASTM C939)
Compressive strength – ASTM C109 modified				
1 day	> 5,500 psi (37,9 MPa)	> 4,500 psi (31,0 MPa)	> 3,600 psi (24,8 MPa)	> 2,800 psi (19,3 MPa)
3 days	> 8,000 psi (55,2 MPa)	> 6,500 psi (44,8 MPa)	> 6,000 psi (41,4 MPa)	> 5,000 psi (34,5 MPa)
7 days	> 9,000 psi (62,1 MPa)	> 7,500 psi (51,7 MPa)	> 6,500 psi (44,8 MPa)	> 5,700 psi (39,3 MPa)
28 days	> 10,500 psi (72,4 MPa)	> 9,259 psi (63,9 MPa)	> 8,500 psi (58,6 MPa)	> 7,250 psi (50 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)				
28 days	> 1,600 psi (11,0 MPa)	> 1,400 psi (9,66 MPa)	> 1,200 psi (8,28 MPa)	> 1,000 psi (6,90 MPa)
Bond strength – ASTM C882				
28 days			> 2,200 psi (15,2 MPa)	> 2,100 psi (14,5 MPa)
Volumetric change	Conforms to ASTM C1107 and CRD-C621 standards			
Bleeding – ASTM C940	Unnoticeable	Unnoticeable	Unnoticeable	Unnoticeable
Splitting tensile – ASTM 496				
28 days	> 850 psi (5,86 MPa)	> 750 psi (5,17 MPa)	> 700 psi (4,83 MPa)	> 600 (4,14 MPa)
VOCs (Rule #1168 of California's SCAQMD)		0 g per L		

## Shelf Life and Product Characteristics (before mixing)

Shelf life	1 year in original bag stored in a dry, covered and well-ventilated place at 73°F (23°C)
Physical state	Powder
Color	Gray

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

## Application Properties

Fluidity	Dry Pack	Plastic	Flowable	Fluid
Mixing ratio (water per 50 lbs. (22,7 kg) of powder)	2.6 U.S. qts. (2,46 L)	3.95 U.S. qts. (3,74 L)	4.23 U.S. qts. (4,0 L)	5.07 U.S. qts. (4,80 L)
Pot life at 73°F (23°C)	30 minutes	1 hour	1 hour	1 hour
Initial set at 73°F (23°C) – ASTM C191	< 2 hours	< 5.5 hours	< 6 hours	< 7 hours
Final set at 73°F (23°C) – ASTM C191	< 4 hours	< 7.5 hours	< 8 hours	< 9 hours

# Planigrout<sup>®</sup> 728



## CSI Division Classification

Non-Metallic, Non-Shrink Grouting	03 62 13
-----------------------------------	----------

## Packaging

Size
Bag: 50 lbs. (22,7 kg)

## Approximate Coverage\*

Size	Yield
Per 50-lb. (22,7-kg) bag mixed	0.43 cu. ft. (0,0122 m <sup>3</sup> )

\* Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.

## RELATED DOCUMENTS

Grouting Between Foundations and Bases for Support of Equipment and Machinery	ACI 351.1R
Report on Foundations for Static Equipment	ACI 351.2R
Standard Specification for Curing Concrete	ACI C308.1

Refer to the SDS for specific data related to health and safety as well as product handling.

## LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

[www.mapei.com](http://www.mapei.com). **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use,

and the user alone assumes all risks and liability. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:



TTMAC ACTM



aci  
American Concrete Institute®

ASC  
THE ADHESIVE AND SEALANT COUNCIL  
SECURING THE FUTURE



### MAPEI Headquarters of North America

1144 East Newport Center Drive  
Deerfield Beach, Florida 33442  
1-888-US-MAPEI (1-888-876-2734) /  
(954) 246-8888

### Technical Services

1-888-365-0614 (U.S. and Puerto Rico)  
1-800-361-9309 (Canada)

### Customer Service

1-800-42-MAPEI (1-800-426-2734)

### Services in Mexico

0-1-800-MX-MAPEI (0-1-800-696-2734)

**Edition Date:** July 31, 2017

PR: 8461 MKT: 17-1743

For the most current **BEST-BACKED™** product data and warranty information, visit [www.mapei.com](http://www.mapei.com).

All Rights Reserved. Printed in the USA. © 2017 MAPEI Corporation.