

TECHNICAL DATA SHEET

DESCRIPTION

The D490 Sleeve-Lock Grout USA is a specially formulated cement based, nonmetallic, non-shrink grout designed for the grouting of the Dayton Superior D410 Sleeve-Lock® Grout Sleeve.

USE

The grout, when used in conjunction with the D410 Sleeve-Lock Grout Sleeve, makes up a unique fully integrated system from Dayton Superior Corporation.

FEATURES

- Develops high compressive strength quickly
- High ultimate compressive strength
- Non-metallic/non-corrosive

PROPERTIES

Meets Corps of Engineers Specification CRD-C621 for non-shrink grout
 Meets ASTM C-1107: Specification for non-shrink grout
 ASTM C-827: Yielded a controlled positive expansion
 Expansion - ASTM C-1090
 1 day-0-0.3, 3 days-0-0.3, 14 days-0-0.3, 28 days-0-0.3

Test Results

Test Results @50F									
Days	@ 1 Day		@ 3 Day		@ 7 Day		@ 28 Day		
Fluidity	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	
Flowable	5,700	39.3	9,200	63.4	10,500	72.3	N/A	N/A	

Test Results @72F									
Days	@ 1 Day		@ 3 Day		@ 7 Day		@ 28 Day		
Fluidity	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	
Flowable	8,500	58.6	10,100	69.6	11,000	75.8	12,000	89.6	
Plastic	10,000	68.9	10,800	74.4	11,800	81.3	13,500	93	

Test Results @90F									
Days	@ 1 Day		@ 3 Day		@ 7 Day		@ 28 Day		
Fluidity	PSI	MPa	PSI	MPa	PSI	MPa	PSI	MPa	
Flowable	9,200	63.4	10,700	73.7	12,200	84.1	N/A	N/A	

Estimating Guide

Yield: 0.42 cubic feet (0.012 cubic meters) per 50 pound (22.7 kg) bag

Usage

Splice Size	(mm)	Sleeves Per Bag of Grout*
#4	(13)	46
#5	(16)	50
#6	(19)	20
#7	(22)	21
#8	(25)	12
#9	(29)	13
#10	(32)	12
#11	(36)	10
#14	(43)	6
#18	(57)	3

Amounts are approximate and only include the grout within the sleeves.

Packaging

PRODUCT CODE	PACKAGE	SIZE	
		lbs	kg
308993	Bag	50	22.7

STORAGE

Shelf life of unopened bags, when stored in a dry facility, is 12 months. Excessive temperature differential and/or high humidity can shorten the shelf life expectancy. Store in a cool, dry area free of direct sunlight.

Surface Preparation:

All substrates must be clean, free from water, oils, dirt, debris or any other foreign matter prior to beginning grouting operation. For post-grout applications, remove seals in both inlet and outlet tubes and inspect to ensure that no blockages exist. Blow clean oil and water free air through the tubes to verify that no obstructions exist.

Water Requirements:

Desired Mix: Water / 50 lbs. (22.7 kg) Bag
 Plastic: 6 pints (2.8 L)
 Flowable: 7 pints (3.3 L)

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Mixing

Mix full bags using only forced action mixers such as horizontal shaft mortar mixers or heavy duty electric mixers with mud or jiffy type mixing paddles. Do not hand mix. Add grout to water while mixer is running. Mix thoroughly for a minimum of 5 minutes. Insufficient mixing can result in poor flow and difficulty in pumping. Consistency and flow will depend upon the type of mixer used, duration of mixing, temperature and amount of water used. Do not retemper grout. Working time is approximately 30 minutes, depending upon temperature. Do not mix more than what can be used within 30 minutes.

Temperature

Recommended grouting temperature range is 50°F (10°C) to 90°F (32°C). This includes ambient, substrate, material and mixing water temperatures. Use cold water for mixing in warm temperatures and hot water for mixing in cooler temperatures. Maintain contact areas between 45°F (7°C) and 90°F (32°C) before grouting and during curing period for a minimum of 24 hours. High grout temperatures may result in premature stiffening of the grout and difficulty in pumping.

Placement:

For pre-grouting placements, pour or pump grout in a continuous operation into the sleeve, rodding continuously to remove entrapped air. For post-grouting placements, pour or pump grout into inlet tubes in a continuous operation.

Continue pumping until grout exiting at the outlet tube flows freely with no air bubbles. Seal the outlet tube 1st, followed by sealing the inlet tube. Inspect and verify after grouting to ensure no voids exist.

CURING

Cure all exposed grout in accordance with ACI 308. A Dayton Superior curing compound meeting ASTM C-309 is recommended.

CLEAN UP

Wet grout can be cleaned with water. Once grout hardens, abrasive methods will be required.

LIMITATIONS**FOR PROFESSIONAL USE ONLY**

Do not re-temper after initial mixing.
Do not add other cements or additives.
Setting time for grout will slow during cold weather, less than 50°F (10°C) and speed up during hot weather, greater than 80°F (27°C).
Mix full bags only.

PRECAUTIONS**READ SDS PRIOR TO USING PRODUCT**

- Product contains Crystalline Silica and Portland Cement – Avoid breathing dust – Silica may cause serious lung problems
- Use with adequate ventilation
- Wear protective clothing, gloves and eye protection (goggles, safety glasses and/or face shield)
- Keep out of the reach of children
- Do not take internally
- In case of ingestion, seek medical help immediately
- May cause skin irritation upon contact, especially prolonged or repeated. If skin contact occurs, wash immediately with soap and water and seek medical help as needed.
- If eye contact occurs, flush immediately with clean water and seek medical help as needed
- Dispose of waste material in accordance with federal, state and local requirements

MANUFACTURER

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WARRANTY

Dayton Superior Corporation ("Dayton") warrants for 12 months from the date of manufacture or for the duration of the published product shelf life, whichever is less, that at the time of shipment by Dayton, the product is free of manufacturing defects and conforms to Dayton's product properties in force on the date of acceptance by Dayton of the order. Dayton shall only be liable under this warranty if the product has been applied, used, and stored in accordance with Dayton's instructions, especially surface preparation and installation, in force on the date of acceptance by Dayton of the order. The purchaser must examine the product when received and promptly notify Dayton in writing of any non-conformity before the product is used and no later than 30 days after such non-conformity is first discovered. If Dayton, in its sole discretion, determines that the product breached the above warranty, it will, in its sole discretion, replace the non-conforming product, refund the purchase price or issue a credit in the amount of the purchase price. This is the sole and exclusive remedy for breach of this warranty. Only a Dayton officer is authorized to modify this warranty. The information in this data sheet supersedes all other sales information received by the customer during the sales process. THE FOREGOING WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES OTHERWISE ARISING BY OPERATION OF LAW, COURSE OF DEALING, CUSTOM, TRADE OR OTHERWISE.

Dayton shall not be liable in contract or in tort (including, without limitation, negligence, strict liability or otherwise) for loss of sales, revenues or profits; cost of capital or funds; business interruption or cost of downtime, loss of use, damage to or loss of use of other property (real or personal); failure to realize expected savings; frustration of economic or business expectations; claims by third parties (other than for bodily injury), or economic losses of any kind; or for any special, incidental, indirect, consequential, punitive or exemplary damages arising in any way out of the performance of, or failure to perform, its obligations under any contract for sale of product, even if Dayton could foresee or has been advised of the possibility of such damages. The Parties expressly agree that these limitations on damages are allocations of risk constituting, in part, the consideration for this contract, and also that such limitations shall survive the determination of any court of competent jurisdiction that any remedy provided in these terms or available at law fails of its essential purpose.