

Non-Shrink Commercial Grout

Date last edited: 7/14/2025

<u>Product Trade Name</u>	<u>Date Approved</u>	<u>Source & Location</u>
NS Grout	4/9/2025	The Euclid Chemical Company 19215 Redwood Road Cleveland, Ohio 441100 (216) 531-9222
SpecChem Multipurpose Grout	4/9/2025	SpecChem LLC 1511 Baltimore Avenue Kansas City MO 64108 (816) 968-5600

Contact:

DOTProductSubmittal@dot.wi.gov



Wisconsin Department of Transportation
Division of Transportation System Development
Bureau of Technical Services
3502 Kinsman Boulevard
Madison, WI 53704

Approved Product List Application Process for Non-Shrink Grout Material

Wisconsin Department of Transportation (WisDOT) requires non-shrink (packaged dry, hydraulic cement) grout materials used in concrete projects from the approved product list (APL).

Approval Process

- To apply for WisDOT's APL process for non-shrink grout material, the manufacturer/supplier must submit the required information listed below for WisDOT's review:
 - Safety Data Sheet
 - Technical Data Sheet
 - American Association of State Highway and Transportation Officials (AASHTO) Product Evaluation & Audit Solutions (formerly NTPEP) or any accredited (AASHTO or Cement and Concrete Reference Laboratory (CCRL)) independent laboratory test data showing the non-shrink grout material has met or exceeded the requirements in outlined in the material property requirements section.
 - If submitting an independent laboratory test data, include the AASHTO/CCRL certification of the testing laboratory.
 - Manufacturer's installation instructions including surface preparation, bonding, and curing requirements for the product seeking approval.
 - Primary point of contact for the submitted product including name, email address, phone number, and mailing address.
- The submitted test data must be less than five years old. Submit the above required information to DOTProductSubmittal@dot.wi.gov.
- By applying, the manufacturer/supplier certifies that they have reviewed the standards/requirements, and their product meets the requirements. WisDOT may reject an APL submittal without further review if WisDOT determines that the product does not meet standards/requirements.
- Applications will be reviewed within 4 weeks of submittal and when the review is completed, manufacturers/suppliers will be notified. Approved products will be listed on the department's APL.

Material Property Requirements

- The non-shrink grout material must be freeze-thaw resistant, non-corrosive, and suitable for exterior application and must meet the testing requirements as specified in Table 1.

Table 1. Non-shrink Grout Material Requirements

Test	Standard	Age/Procedure	Requirements
Compressive strength (psi)	ASTM C1107	3 days	≥ 2,500
		7 days	≥ 3,500
		28 days	≥ 5,000
Early height change (%)	ASTM C1107/ ASTM C827	at time of final setting	≤ +4.0
Height change of moist cured hardened grout (%)	ASTM C1107/ ASTM C1090	1, 3, 7, and 28 days	0.0 to +0.3
Shrinkage (%)	ASTM C1107/ ASTM C157	56 days	0 from max expansion
Freeze-Thaw Durability	ASTM C666/ AASHTO T161	Procedure A, Durability Factor	90% at 300 cycles
Rapid Chloride Permeability (Coulombs)	ASTM C1202	28 days	≤ 2,000

Non-shrink Grout Material for High Strength Application in Structures

- Manufacturers seeking product approval for structural applications like shear key and other high strength application must meet the higher compressive and bond strength requirements as specified in Table 2.

Table 2. Non-shrink Grout Material Requirements for High Strength Application in Structures

Test	Standard	Age	Requirements
Bond Strength (psi)	ASTM C882	24 hours	> 1,000
Compressive Strength (psi) ^[1]	ASTM C109	3 days	≥ 5,000
		7 days	> 6,000
Early height change (%)	ASTM C1107/ ASTM C827	at time of final setting	≤ +4.0
Height change of moist cured hardened grout (%)	ASTM C1107/ ASTM C1090	1, 3, 7, and 28 days	0.0 to +0.3
Shrinkage (%) ^[2]	ASTM C1107/ ASTM C157	56 days	0 from max expansion
Freeze-Thaw Durability	ASTM C666/ AASHTO T161	Procedure A, Durability Factor	90% at 300 cycles
Rapid Chloride Permeability (Coulombs)	ASTM C1202	28 days	≤ 2,000

^[1] For shear key grout, compression strength shall be based on the mixing ratio to achieve flowability (flowable/fluid).

^[2] Height change of hardened grout at 56 days of age when exposed to air drying for 28 days after 28 days of moist curing.

Compliance

- To remain on the WisDOT APL, the manufacturer/supplier must reapply every 5 years.
- The department may request re-compliance at any time. WisDOT may request a sample of the material to test for conformance and compare the results with the vendor test data. The verification testing sample will be taken by a WisDOT project engineer.
- The manufacturer/supplier shall be responsible for quality control of the product. The manufacturer/supplier shall also sample and test the material as necessary during production to ensure that all material conforms to the specifications as listed above and is consistent with the sample of material that was tested and approved. When requested by the Department, the manufacturer/supplier will submit the quality control data within 30

days. Any change in the product will require a requalification at the manufacturer's/supplier's expense.

Non-Compliance

- WisDOT will continue to regard this approval valid for 5 years unless/until any of the following conditions arise:
 - If the manufacturer/supplier changes the product physical or chemical properties without notifying WisDOT.
 - The product samples audited/tested by WisDOT do not meet the requirements as specified in this document.
- Manufacturers/suppliers are required as a condition of approval to inform WisDOT of any of the above conditions as soon as they become aware of them.

Correspondence

If the name and/or address of the contact person in your company for this correspondence have changed, or if you have questions or need further information, please contact us via email DOTProductSubmittal@dot.wi.gov.