

<sup>®</sup>  
**FENON**

**MORTARS & GROUTS**  
Product Catalog



A TCC Materials® Brand









# PERFORMANCE BUILT IN

Tenon's portfolio of specialty concrete, repair, restoration, and chemical products is professionally formulated for reliability and ease of use. With Tenon, performance is built in, giving construction professionals the confidence and peace of mind for consistent, trusted results.



## Tenon® Product Categories

### Mortars & Grouts

### Cement & Concrete

### Repair & Restoration

### Construction Chemicals

### Cleaners, Additives & Admixtures

## Mortars & Grouts

Welcome to Tenon's Mortars & Grouts Product Catalog - this catalog emphasizes not only product features and benefits but also application guidance, helping you select the right mortar or grout for each project.

### Product Types

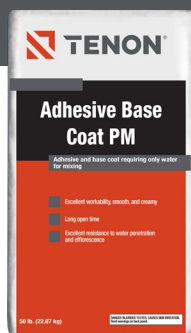
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## MASONRY MORTARS

Masonry mortars are engineered blends of cement, lime, and sand for bonding brick, block, and other masonry units. They provide workability, strength, and durability, creating stable, long-lasting walls and structures.

## Adhesive Base Coat PM



Adhesive Base Coat PM is a dry-mix polymer modified adhesive and base coat requiring only water for mixing.

### Features & Benefits

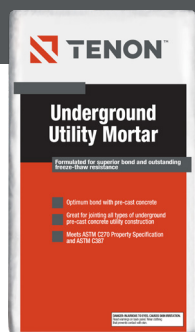
- Excellent workability, smooth, and creamy
- Long open time
- Non-sag, non-slump performance
- Excellent resistance to water penetration and efflorescence
- Good for small repairs or applications, mix only what you need

50 lb. Bag BOM #114899

### Use For:

- Vertical applications
- Interior or exterior
- Adhesive to adhere expanded polystyrene foam board and shapes to concrete, masonry surfaces

## Underground Utility Mortar



Underground Utility Mortar is a pre-mixed mortar made with cement, lime, and sand and is designed for strong bonding and durability in underground concrete work.

### Features & Benefits

- Bonds well to precast concrete
- Stands up to freeze-thaw cycles
- Air-entrained and easy to use; just add water
- Meets ASTM standards for performance and quality

50 lb. Bag BOM #120704

80 lb. Bag BOM #114181

### Use For:

- Above or below ground
- Sealing joints in underground precast concrete (manholes, catch basins)
- Laying concrete brick in utility structures





## REFRACTORY MORTARS

Refractory mortars are heat-resistant formulations for firebrick, ovens, kilns, and high-temperature applications. They provide strong adhesion and long-lasting durability under extreme heat conditions.



## Refractory Mortars

Refractory Mortar is a heat-resistant mortar mix for high temperature applications.

### Features & Benefits

- Handles extreme heat, up to 2550°F (1400°C)
- Preblended for easy mixing; just add water
- Strong, long-lasting bond
- Resists freezing, water, and acid once cured
- Meets ASTM C199

25 lb. Pail BOM #114050

50 lb. Bag BOM #120924

See pg. 14 for all available sizes.

### Use For:

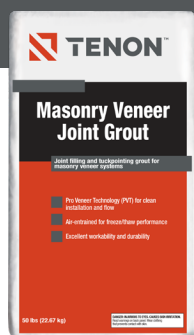
- Laying fire brick or clay flue liners
- Parging smoke chambers
- Building or repairing fireplaces, chimneys, BBQs, and fire pits



## STONE VENEER MORTARS

Stone veneer mortars are designed for securing natural or manufactured stone to interior or exterior surfaces. They offer excellent adhesion, workability, and long-lasting performance while maintaining aesthetic appeal.





50 lb. Bag

BOM #120463

See pg. 14 for all  
product variants.

## Masonry Veneer Joint Grout

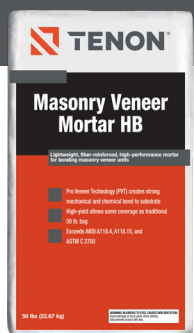
Masonry Veneer Joint Grout is a preblended, cementitious grout for filling and tuck-pointing joints in stone, brick, and masonry veneer. Air-entrained for freeze-thaw durability and formulated for smooth, clog-free grout bag application.

### Features & Benefits

- Preblended—just add water
- High-strength, non-sag formula
- Air-entrained for freeze-thaw resistance
- Consistent performance and reduced cracking
- Excellent flow for grout bag applications
- Resists water penetration and efflorescence

### Use For:

- Tuck-pointing and filling joints in precast, lightweight masonry veneer units
- Interior or exterior applications



40 lb. Bag

BOM #120462

## Masonry Veneer Mortar HB

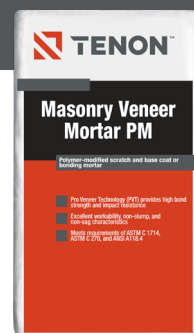
Masonry Veneer Mortar HB is a lightweight mortar for attaching stone, brick, tile, and veneers to walls and floors.

### Features & Benefits

- Strong bond; holds up to 25 lbs./sq. ft.
- Covers more area than typical mortars
- Preblended; just add water and mix
- Resists water, cracking, and staining
- Meets or exceeds ANSI A118.4, ANSI A118.11, ANSI A118.15; ASTM C270, IBC/IRC Shear Bond Strengths
- Smooth, easy to apply, and stays in place (no sagging)

### Use For:

- Interior or exterior surfaces
- Wall and floor applications
- Installing thin stone, brick veneer, ceramic, porcelain, or tile



50 lb. Bag

BOM #120461

## Masonry Veneer Mortar PM

Masonry Veneer Mortar PM is a polymer-modified mortar used for setting thin brick, stone, or veneer. It can also be used as a base coat or joint grout, even in dry stack applications without visible joints.

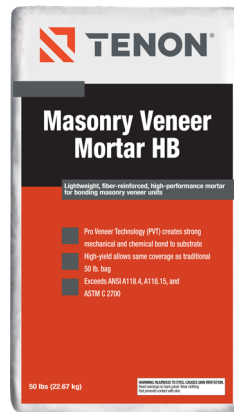
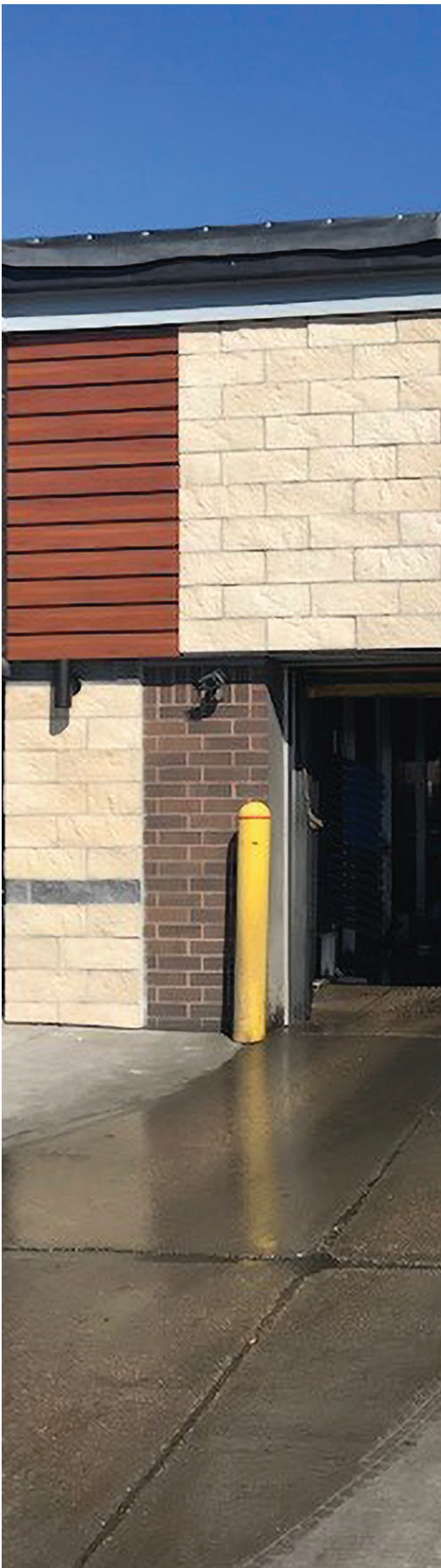
### Features & Benefits

- Strong, lasting bond with reduced cracking and pop-offs
- Easy to use; smooth, non-sag, and preblended (just add water)
- Doubles as a base coat, bonding mortar, or grout
- Meets or exceeds ASTM C1714, ASTM C270, ANSI 118.4, and ACI 530

### Use For:

- Installing thin stone, brick, or precast veneer
- Use over concrete, masonry, wood, or metal walls
- Interior/exterior applications, above or below ground





## Project Spotlight

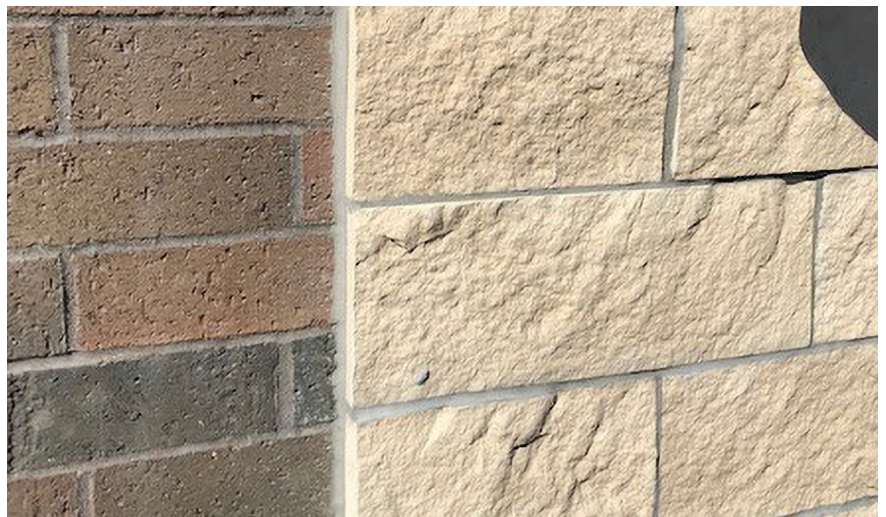
# CAR WASH

Eden Prairie, MN

## Masonry Veneer Mortar HB at Work

Eric Roussel, project manager and foreman for Randy Roussel Masonry, had a problem while on the job. “We had a 700 sq. ft. residential thin veneer job utilizing a natural stone,” he said. “This stone is cut extremely smooth on the back and is very dense. Some of the pieces were 8” high and up to 36” long. We applied a traditional scratch coat to the walls and were struggling trying to get anything to stick to the wall.”

Alex, Roussel’s rep from TCC Materials, visited the jobsite with a bag of Tenon® Masonry Veneer Mortar HB and explained how it is different than traditional mortars. “To test it out, we grabbed the biggest stone we had and stuck it to the middle of the wall using the Masonry Veneer Mortar HB, and it didn’t move!” said Roussel. “Using Masonry Veneer Mortar HB, we had no issues from then on. In the future we will be mindful to look for applications where this product could be used and start with it.”



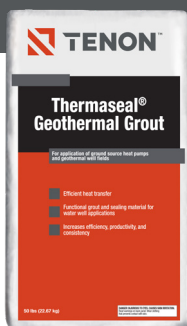




## GEOTHERMAL GROUTS

Geothermal grouts are specialized formulations used around geothermal loops to improve heat transfer, stabilize the ground, and provide long-term performance in energy applications.

## Thermaseal® Geothermal Grout



Thermaseal Geothermal Grout is a special grout used to safely seal and improve heat flow in geothermal and water well systems.

### Features & Benefits

- Preblended for easy, consistent mixing
- Safe for use around potable water
- Excellent thermal conductivity for efficient heat transfer
- Creates a rigid, low permeability seal to protect groundwater
- Available in multiple versions, including MN Mix (meets Minnesota Health Dept. specs), High Flow (HF), and HF Low Permeability

50 lb. Bag BOM #121014

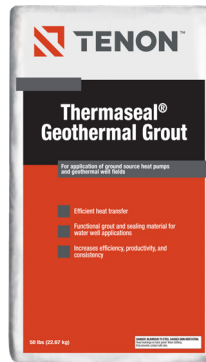
See pg. 14 for all product variants.

### Use For:

- Geothermal boreholes and ground source heat loops
- Sealing and grouting for water wells







## Project Spotlight

# JOHNSON SENIOR HIGH SCHOOL

St. Paul, MN

## Thermaseal Geothermal Grout at Work

Johnson Senior High School stands in the heart of the Payne-Phalen neighborhood in St. Paul, MN. Established in 1897, it sits in a densely populated neighborhood near the city's core, making it a candidate for a geothermal well field when it needed a new heating, cooling, and humidity control system. TCC Materials manufactures a geothermal grout that meets the Minnesota Department of Health's stringent rules – meaning it is safe for contact with potable groundwater.

Tenon® Thermaseal® Geothermal Grout is a thermally conductive cementitious grout that offers low absorption to prevent contamination and mixing with groundwater aquifers, which are a critical component of geothermal heating and cooling systems. Depending on the size, geothermal systems can consist of dozens of wells in which geothermal grout is installed. A geothermal system consists of three parts:

- Ground loop – piping system and the wells
- Heat pump/exchanger – moves warm/cold water between the building and the wells
- Distribution system – ductwork inside the building

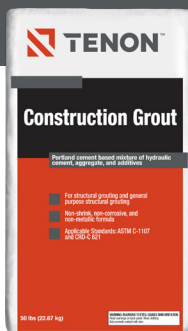
The geothermal system works because the fluid in the system absorbs the heat from the surrounding earth. This fluid is pumped in pipes to the heat pump located in the building. On the heat pump is a heat exchanger that uses the energy to warm the air that passes through the unit. The heated air circulates through the ductwork in the building. The heat exchanger extracts heat from the air to cool the building. The heat pump moves the hot fluid back into the ground to be cooled and then brings the cool water into the system to cool the building.





## NON-SHRINK GROUTS

Non-shrink grouts are cementitious materials that maintain volume when curing. They are ideal for anchoring machinery, filling gaps, and structural repair, providing consistent strength and durability.



## Construction Grout

Construction Grout is a non-shrink grout used for anchoring bolts and setting columns and equipment bases, and in other heavy-duty structural projects.

### Features & Benefits

- Doesn't shrink or crack
- Easy to pump into place
- Safe, non-metallic, and non-corrosive
- Works in cold weather (with Tenon® Fast-Set Liquid Activator)
- Meets ASTM C 1107 and CRDC621

50 lb. Bag BOM #120720

See pg. 14 for all available sizes.

### Use For:

- Anchoring bolts or rebar
- Setting structural columns
- Precast panels and steel plates
- Use above or below ground
- Equipment like generators, compressors, and pumps



## High Strength Precision Grout

High Strength Precision Grout is a flowable grout designed for structural work requiring strong, stable, and precise placement.

### Features & Benefits

- High early and final strength for fast, reliable performance
- Easy to pump into tight or hard-to-reach areas
- Resists water, salt, corrosion, and freeze/thaw damage
- Non-metallic and safe for reinforcing steel
- Can be extended with aggregate for larger fills
- Meets CRD C621 and ASTM C1107
- Non-shrink and high-density; fills fully and resistant to cracking

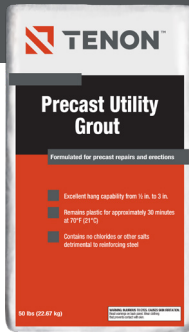
50 lb. Bag BOM #120707

### Use For:

- Machinery bases, anchor bolts, columns, and structural grouting
- Industrial equipment and heavy-duty applications
- Jobs needing non-staining, non-shrinking, corrosion-resistant grout



## Precast Utility Grout



50 lb. Bag BOM #115760

Precast Utility Grout is a fast-setting, non-shrink grout for use in repairing or building precast concrete projects.

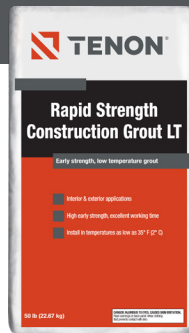
### Features & Benefits

- Adheres well to surfaces from 1/8 in. - 3 in. thick
- Strong, durable, and sets quickly
- Doesn't shrink, stain, or corrode
- Safe for steel, chloride-free and non-metallic
- No forms needed; apply by hand or trowel
- Works in dry pack or mortar consistency
- Handles freeze/thaw cycles
- Easy to shape and sand into shape for up to 30 minutes

### Use For:

- Repairing vertical or overhead concrete and masonry
- Bedding or joining precast concrete sections
- Restoring architectural elements, bridges, tunnels, parking decks, and more

## Rapid Strength Construction Grout LT



50 lb. Bag BOM #114103

Rapid Strength Construction Grout LT (Low Temperature) is a fast-setting, high strength, flowable grout designed for cold weather and heavy-duty structural work.

### Features & Benefits

- Sets quickly in cold temps, down to 35°F (2°C)
- High early and long-term strength for fast project turnaround
- Non-shrink and highly fluid; fills gaps completely
- Resists water, salt, and freeze/thaw damage
- Safe for steel; non-corrosive and chloride-free
- Meets CRD C621 and ASTM C1107

### Use For:

- Machinery bases, anchor bolts, and equipment pads
- Precast columns, crane rails, bridge seats, and structural grouting
- Indoor or outdoor use where quick strength is critical

## Ultra High Strength Precision Grout



50 lb. Bag BOM #114200

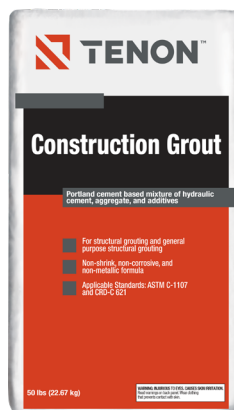
Ultra High Strength Precision Grout is a high-performance, flowable grout made for the most demanding structural applications.

### Features & Benefits

- Ultra high compressive strength (>17,500 psi)
- Fast setting with extended working time
- Fills completely and won't shrink
- Resists water, salt, and freeze/thaw damage
- Pumpable for hard-to-reach areas
- Safe for steel; non-metallic and chloride-free
- Meets CRD C621 and ASTM C1107

### Use For:

- Heavy equipment bases, anchor bolts, and precast columns
- Crane rails, bridge seats, dowels, and industrial machinery
- Interior/exterior projects needing maximum strength and durability



## Project Spotlight

# STONE ARCH BRIDGE RENOVATION

Minneapolis, MN

## Construction Grout at Work

One of Minneapolis' most iconic landmarks, the James J. Hill Stone Arch Bridge, is being restored using several products from TCC Materials®. American Masonry Restoration of Fridley, MN, is repointing, repairing, and replacing limestone on the 2,100-foot-long bridge, which temporarily closed in April and is expected to reopen in 2025.

The company engineered a custom rigging system to place the stones – sourced from quarries in Minnesota and Iowa just like the original build – and has replaced 438 stones in the first phase of the project. Tenon® Construction Grout is used as a flowable mixture that is pumped behind the replacement stones and around steel anchor bolts.

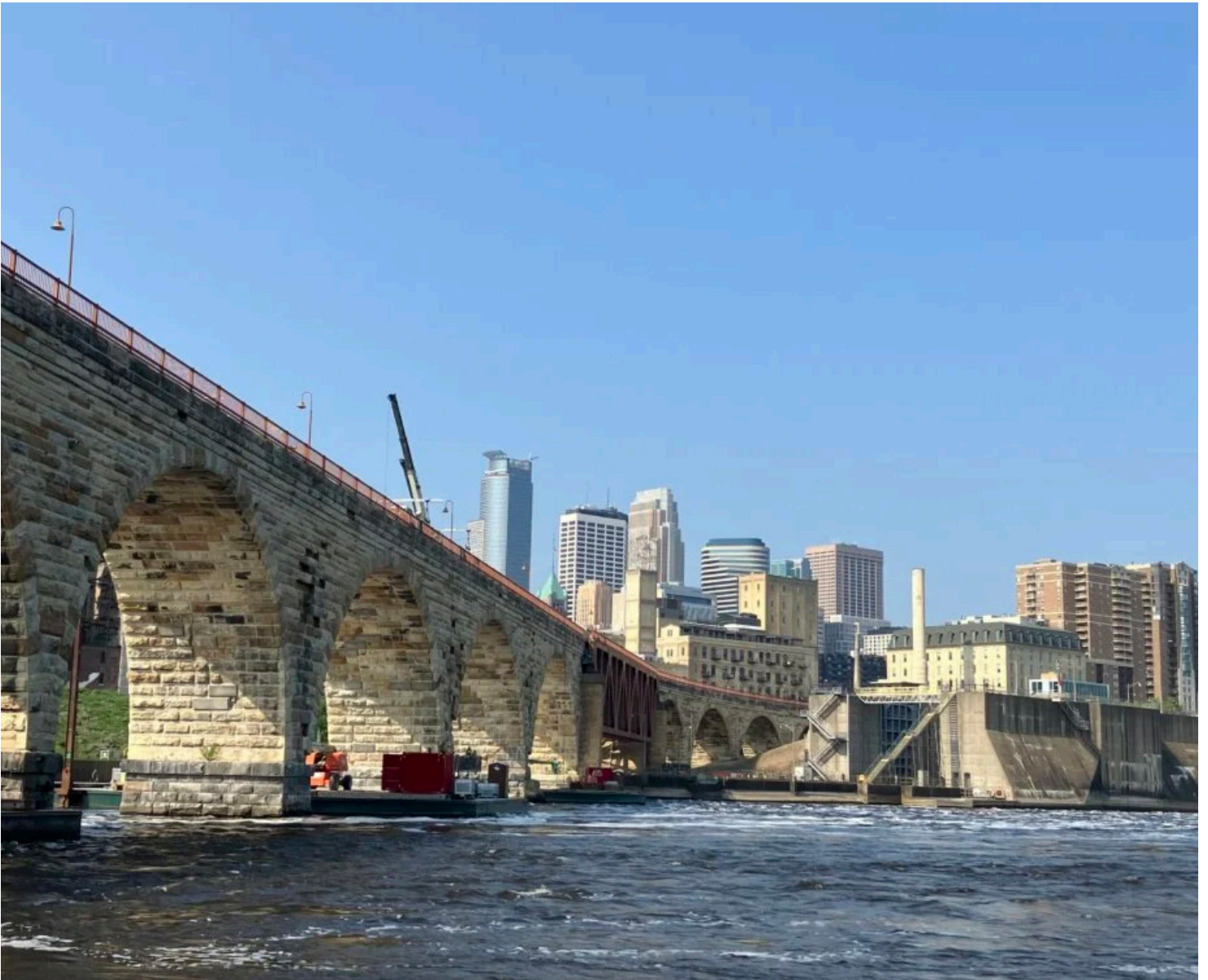
AMR repointed and stabilized the bridge prior to starting the repair and replacement of limestone. The team used Spec Mix Type S and N White Mortar; each has variable amounts of white Portland cement, lime, and sand to reach desired strengths needed. The Type S mortar was used to repoint the “Skyview” joints along the top of the bridge, and Type N is used for the joints running along the side and arches within the first 4 inches of depth.

“We typically use Spec Mix Type O on historic preservation projects, but because this is a structural project, we needed a tougher product,” said Dustin Sly, project manager for AMR. “We tested several products but went back to the Spec Mix Type N that we tested first.”

Next spring, AMR will replace about the same number of stones in phase two, which will focus on the west end curve that approaches downtown Minneapolis.

American Masonry Restoration is an award-winning masonry restoration firm in the Upper Midwest that has provided its expertise and craftsmanship for some of region's most iconic historical structures. Kraemer North America is the general contractor for the \$38.5 million project, which improves the structural condition of the bridge while preserving the bridge for future generations. Built between 1881 and 1883, the bridge last carried rail passengers in 1978. Today it offers unparalleled views of the Mississippi River, St. Anthony Falls, and the Minneapolis skyline. Named a National Historic Engineering Landmark in 1974, the Stone Arch Bridge has served as a pedestrian and bike trail since the early 1990s and is part of the Minneapolis Parks District's St. Anthony Falls Heritage Trail. It is the only arched bridge made of stone on the Mississippi River.





## Masonry Mortars

Adhesive Base Coat PM	50 lb. (22.7 kg) Bag	#114899	pg. 4
Underground Utility Mortar	50 lb. (22.7 kg) Bag	#120704	pg. 4
Underground Utility Mortar	80 lb. (36 kg) Bag	#114181	pg. 4

## Refractory Mortars

Refractory Mortar	10 lb. (4.5 kg) Pail	#120913	pg. 5
Refractory Mortar	25 lb. (11.4 kg) Pail	#114050	pg. 5
Refractory Mortar	50 lb. (22.7 kg) Bag	#120924	pg. 5
Refractory Mortar	50 lb. (22.7 kg) Pail	#121094	pg. 5

## Stone Veneer Mortars

Masonry Veneer Joint Grout (Natural Gray)	50 lb. (22.7 kg) Bag	#120463	pg. 6
Masonry Veneer Joint Grout (White)	50 lb. (22.7 kg) Bag	#120464	pg. 6
Masonry Veneer Joint Grout (Tan)	50 lb. (22.7 kg) Bag	#120465	pg. 6
Masonry Veneer Joint Grout (Tan)	50 lb. (22.7 kg) Bag	#120466	pg. 6
Masonry Veneer Mortar HB	40 lb. (18.1 kg) Bag	#120462	pg. 6
Masonry Veneer Mortar PM	50 lb. (22.7 kg) Bag	#120461	pg. 6

## Geothermal Grouts

Thermaseal® Geothermal Grout (MN Mix)	50 lb. (22.7 kg) Bag	#121014	pg. 8
Thermaseal® Geothermal Grout (1.1 HF Mix)	50 lb. (22.7 kg) Bag	#113254	pg. 8
Thermaseal® Geothermal Grout (0.75 HF Mix)	50 lb. (22.7 kg) Bag	#129569	pg. 8
Thermaseal® Geothermal Grout (0.75 HF Low Perm Mix)	50 lb. (22.7 kg) Bag	#129711	pg. 8
Thermaseal® Geothermal Grout (1.1 HF Mix)	3000 lb. (1361 kg) Bag	# 114277	pg. 8

## Non-Shrink Grouts

Construction Grout	50 lb. (22.7 kg) Bag	#120720	pg. 10
Construction Grout	3000 lb. (1361 kg) Bag	#113219	pg. 10
High Strength Precision Grout	50 lb. (22.7 kg) Bag	#120707	pg. 10
Precast Utility Grout	50 lb. (22.7 kg) Bag	#115760	pg. 11
Rapid Strength Construction Grout LT	50 lb. (22.7 kg) Bag	#114103	pg. 11
Ultra High Strength Precision Grout	50 lb. (22.7 kg) Bag	# 114200	pg. 11

## Contact Us

*For all product information and availability, please contact  
your local sales representative.*



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