



SECTION [32 15 40]

KAFKA STABILIZED PATHWAY AGGREGATE

NOTE: These specifications were current at the time of publication but are subject to change at any time without notice. Please confirm the accuracy of these specifications with the manufacturer and/or distributor prior to installation.

PART 1: GENERAL

1.1 SUMMARY

- A. This section includes materials and execution information for construction with aggregate with Organic-Lock binder.
- B. Related Sections:
 - Section []
 - Section []
 - Section []

1.2 REFERENCES

- A. ASTM C136 / C136M – 14, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates, ASTM International, West Conshohocken, PA, 2014, www.astm.org

1.3 SUBMITTALS

- A. Submit in accordance with Section 01 33 00 - Submittal Procedures:
 - 1. [1 quart] [] sample of base course.
 - 2. [1 quart] [] sample of unblended crushed aggregate material sourced from Kafka Granite.
 - 3. Manufacturer's Material Safety Data Sheet.
 - 4. Sieve Analysis

1.4 SITE CONDITIONS

- A. Ensure that the subgrade and base are properly graded and compacted to required specifications.
- B. Do not install the Stabilized Aggregate during rain. Rain within 3-5 days after installation will increase curing time.
- C. Protect all nearby surfaces, plants, and structures from possible contamination from materials or damage by equipment.



- D. It is not recommended to install when temperatures are below 40 degrees Fahrenheit (5 degrees Celsius).
- E. Verify existing slope and site drainage conditions meet Organic-Lock Stabilized Aggregate requirements.
 - a. Verify with a representative of Kafka Granite prior to installation.
- F. Contractor to verify sprinkler heads are not directed on to proposed stabilized aggregate. Adjust irrigation heads as necessary to keep water and overspray off finished material.

1.5 PRE-CONSTRUCTION

- A. Contractor to attend a virtual pre-construction meeting led by Kafka Granite to review installation best practices, site conditions and project expectations.
- B. Pre-construction meeting to take place at a minimum [one week] prior to installation.

1.6 DELIVERY, HANDLING, AND STORAGE

- A. Delivery: Delivery of Organic-Lock Stabilized Aggregate pre-blended from Kafka Granite. Contact Kafka Granite for delivery information
- B. Storage:
 - 1. Protect stabilized crushed aggregate mix from contamination. Store undercover if the blended and hydrated aggregate is sitting for long periods of time (longer than 48 hours), or when subject to rainfall, it needs to be turned with a skid steerer or loader to ensure consistent moisture content throughout prior to installation. For any questions regarding storage, *contact a representative from Kafka Granite.*
 - 2. Provide a smooth clean surface for material storage.

PART 2: PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Provide "Stabilized Aggregate Pathway Mix" natural stone aggregate paving system by the following:

Kafka Granite, LLC
550 State Highway 153
Mosinee, WI 54455
715-846-6040
kfoster@kafkagranite.com
www.kafkagranite.com

2.2 MATERIALS

- A. Stabilized Aggregate Paving Material
 - 1. Crushed Aggregate Material



- a. Consisting of sound, angular, durable particles.
- b. Gradation:

Optimal Gradation		
Sieve	Sieve Size (mm)	Percent Passing
3/8"	9.51	100%
4	4.75	80% - 100%
8	2.36	65% - 90%
16	1.18	40% - 60%
30	0.6	25% - 55%
50	0.3	15% - 35%
100	0.15	10% - 20%
200	0.075	5% - 15%

- 2. Organic-Lock Binder
 - a. Patented powdered organic binder designed to be pre-blended with crushed aggregate from Kafka Granite prior to shipping.
 - b. Made from 100% naturally occurring materials.
- 3. Color
 - a. To be selected from Kafka's 40+ aggregate colors.
- B. Substitutions not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00.
- D. Factory Blended Mix
 - a. General: Manufacturer's mix of natural stone aggregate and Organic-Lock binder in proportional batches suitable for the installation of pedestrian paths and vehicular drives.
 - b. Mixing and Handling: At the manufacturing facility, mix Organic-Lock stabilized binder in accordance with manufacturer's recommendations and blend with aggregate at the facility and shipped to the job site in bulk or super sacks.

2.3 BASE COURSE MATERIALS

- A. Comply with the following standards for road base materials.
 - a. Road Base Material: Also known as road rock, road gravel, aggregate base, AB, asphalt base and 3/4" minus.
 - b. ASTM D698 / ASTM D1557: Standard and Modified Proctor tests determining laboratory compaction characteristics and maximum dry density

2.4 ACCESSORIES



- A. Water: Clean and potable, free from contaminants that would discolor or be deleterious to the stabilized natural stone aggregate paving.
- B. Steel Edging: 3/16-inch thick x 4-inch deep with overlapping joints.
 - a. Stakes: 3/16-inch x 16-inch long x 1 3/4-inch wide at top tapering to point at bottom; locate at 36-inch on center maximum.
- C. Do not use Aluminum Edging with stabilized pathway aggregate.

PART 3: EXECUTION

Specifier Notes

1. Proper hydration of the Organic-Lock Stabilized Aggregate is crucial to the installation and longevity of the surface. The instructions below refer to Organic-Lock that has been pre-blended with aggregate and contains optimal moisture content. For more information on pre-wetting, and pre-blending Organic-Lock refer to our installation guideline video <https://www.kafkagranite.com/stabilized-pathway-mix-installation-video/>
2. Achieve best results installing Organic-Lock Stabilized aggregate in dry conditions and temperatures above 40° Fahrenheit (5° Celsius). Both wet and cold conditions slow down the curing/drying process.

3.1 EXAMINATION

- A. Examine areas and conditions under which work of this section will be performed. Notify landscape architect of unsatisfactory conditions before proceeding.
- B. Correct conditions detrimental to timely and proper completion of work
- C. Do not proceed until unsatisfactory conditions are corrected
- D. Lay out work prior to the commencement of installation.

3.2 PREPARATION

- A. Excavation: Excavate to depth required so edges of Organic-Lock Stabilized Aggregate paving will match adjacent grades and have a maximum cross-slope of 2 percent. Ensure edges and bottom of excavation are in a smooth and even line.
- B. Subgrade Preparation: Plow, harrow and mix the entire surface of the in-place subgrade to a depth of at least 6 inches. After the material has been thoroughly mixed the subgrade shall be brought to line and grade and compacted to 95% of the maximum laboratory dry density as determined by the Standard Proctor Test.
- C. Base Course Preparation: Place the subbase course aggregate free from ridges, depressions or hollows. Rake and compact to 95% Standard Proctor Density.

3.3 WATERSHED MANAGEMENT

- A. Crowns and Cross Slopes
 - a. Crowns and/or cross-slopes must be incorporated into the compacted base material.
 - b. If the slope is 2% or lower, a crown should be incorporated into the pathway.



- c. If the slope is greater than 2%, incorporate a cross-slope.
- B. If any of the following conditions occur on site, contact a representative of Kafka Granite for a design consultation prior to installation.
 - a. Areas with a 5% slope or greater
 - b. Areas where the surrounding watershed drains on to the Organic-Lock Stabilized Aggregate path in a significant way.
 - c. Areas where parking lots or large areas of hard surface drain directly on to the Organic-Lock Stabilized Aggregate
 - d. Areas where fast-moving water will be flowing over the Organic-Lock Stabilized Aggregate material.

3.4 INSTALLATION

- A. Stabilized aggregate is considered a finished product and should not be installed until the majority of construction is complete.
 - a. Do not drive heavy construction equipment over finished material.
 - b. Install stabilized aggregate only after landscape, mulch, or other finish materials have been completed.
- B. Edging: Install edging so final grade after compaction is flush with the top of the stabilized aggregate paving to prevent capture of water. Provide sufficient stakes to secure edging in place during and after installation of the stabilized aggregate paving.
 - a. Acceptable forms of edging include:
 - i. Natural Edge
 - ii. Steel Edging
 - iii. Concrete Edge
 - iv. Stone Edging
 - v. Paver Edging
 - b. Aluminum Edging is not an acceptable material
- C. Subgrade: Proof-roll the subgrade with heavy pneumatic-tired equipment to locate unstable areas and to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - a. Excavate soft spots, unsatisfactory soils, and areas of excessive rutting, and replace with compacted backfill as directed by Landscape Architect.
 - b. The surface of the completed subgrade shall be bladed to a smooth and uniform texture
 - c. The finished subgrade shall be uniform and free from deleterious debris such as organic materials, nails, stones and loose soil.
 - d. Prior to placement of stabilized aggregate paving, presoak all areas of application.
- D. Subbase: Install aggregate subbase to a compacted depth of 4 to 6-inches minimum for pedestrian traffic, and 8 to 12-inches minimum for vehicular traffic in accordance with manufacturer's recommendations. Install the subbase in multiple 3 to 4-inch lifts, and compact to a minimum 95% density.
- E. Hydration: Proper hydration is critical to the success of the Organic-Lock Stabilized Aggregate.
 - a. Prior to spreading, contractor to hydrate stabilized aggregate material to manufacturers recommended hydration level.
 - i. Contractor to perform snowball test in field to verify proper hydration level prior to spreading.



- F. Spreading: Spread the loose and uncompacted Organic-Lock Stabilized Aggregate over the compacted base material in lifts of 4" or less.
 - a. Provide 3" depth of stabilized material for pedestrian applications.
 - b. Provide 4" depth of stabilized material for vehicular applications.
 - c. Allow for approximately 25% of material depth for compaction.
- G. Compaction: Compact each lift of the subgrade, subbase and stabilized aggregate paving materials with a one to three-ton roller. In small areas that are difficult to access with compaction equipment, hand tamping may be performed with multiple passes to achieve the required density.
 - a. Vibratory compaction is acceptable for the base material.
 - b. Vibratory compaction for Organic-Lock Stabilized Aggregate is only acceptable in areas not accessible by roller.
- H. Completing Installation
 - a. Apply a light spray of water to the surface of the material to give a clean appearance. Apply until the water begins to run-off.
 - b. Do not allow any pedestrian or vehicular traffic on the newly installed pathway until fully cured, a minimum of 24-72 hours.

3.5 INSTALLATION TOLERANCES

- A. Stabilized Aggregate Paving: Allow for 20% - 25% compaction
 - a. Subbase Course: Plus or minus 1/2-inch.
 - b. Surface Course: Plus 1/4-inch, no minus.
- B. Stabilized Aggregate Paving Smoothness
 - a. Produce a surface smoothness within 1/4-inch tolerance when measured with a 10-foot straightedge.
 - b. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowed variance from template is 1/4-inch.

3.6 CLEANUP AND PROTECTION

- A. Thoroughly clean all areas where work has occurred. Remove from site excess material, debris and rubbish.
- B. Take all precautions necessary to protect completed work until Substantial Completion of project.
- C. Contact Kafka Granite for preferred maintenance guidelines, if necessary.

END OF SECTION