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Stabilizer® for aggregate fire lanes, driveways, and parking lots



Advancing the Evolution of Soil 26 Years Over 100,000 Projects 36 Countries

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Materials

Stabilizer- The Original Natural Binder

Stabilizer is an organic powder that stabilizes soil by binding soil particles. It is a natural, non-toxic, non-staining, odorless, environmentally safe powder derived from crushed seed hulls. Stabilizer can be used with a variety of crushed aggregates: Decomposed Granite, Crushed Stone, Hard Rock, or Limestone, etc. to create natural looking fire lanes, driveways, and parking areas. Stabilizer strengthens aggregates to withstand traffic and weather extremes. Stabilizer is patented and manufactured solely by Stabilizer Solutions, Inc. One-ton of Stabilized aggregate typically covers 65-sqft at a 3" depth. Coverage will vary depending on aggregate.



Stabilizer is a 100% natural powder available in 40-lb bags or 2000-lb sacks.

Crushed Aggregate

Select a crushed aggregate for use with Stabilizer that consists of inert materials that are hard and durable, with stone free from coatings. Stabilizer will not bind every aggregate, so please keep to the following distribution. Please send any borderline aggregates in for testing.

U.S. Sieve No.	Percent Passing by Weight
# 1/2"	95 – 100
# 3/8"	90 – 100
# 4	65 – 80
# 8	48 – 63
# 16	40 – 49
# 30	30 – 40
# 50	20 – 27
# 100	10 – 18
# 200	10 - 12

Preparation

Stabilized aggregate requires a 6" compacted layer of your state's DOT recommended crushed granular road base. Pre-soak the base material with water and compact to 95% prior to installing Stabilized aggregate. Although porous, it is recommended to have proper drainage available to ensure no standing water on surface or adjacent to Stabilized aggregate, including downspouts when placed under roof overhang.



Compaction of wet granular base

Blending

Stabilizer MUST be thoroughly pre-mixed with crushed aggregate at the rate of 15-lbs of Stabilizer per 1-ton of aggregate. Check with Stabilizer Solutions, Inc. for correct Stabilizer rate, as the amount may vary for your project and climatic conditions. Drop spreading of Stabilizer over pre-placed aggregate or mixing by rototilling is not acceptable for vehicular access. Stabilizer should be mechanically blended (Bucket blending is not an approved method). Stabilizer can be blended by cement mixer, pug mill, Dakota blender, generally any paddle type blenders (no screw type blenders). If you wish to use another type of blender, please verify with the company. Always blend the material DRY and leave material in mixer for several passes of the mixing paddles. Stabilizer will disappear within material quickly, but may not be blended completely.



Stabilizer and aggregate blended in two different sized cement mixers

After Stabilizer is blended into aggregate, confirm that Stabilizer has been thoroughly blended. The best way to do this is the 'ball test'.

- Take a handful of blended aggregate and add a few ounces of water to it.
- Work around material in both hands to ensure no dry aggregate remains.
- Form aggregate into ball by hand and apply pressure.

The result should be an aggregate ball with a doughy consistency that holds together. You should be able to toss the ball in your hand without it breaking apart.



The ball test

Installing Stabilized Aggregate

Place the Stabilizer and aggregate mixture on the prepared base, and rake smooth to desired grade and cross section. Place material to sufficient depth to allow 4" for residential or 5" depth

for commercial after compaction. Do not install Stabilized aggregate during rainy conditions or below 40 degrees Fahrenheit and falling.

Machine Application



Hand Application



Watering

Water activates Stabilizer. It is essential that Stabilizer be watered thoroughly through the entire depth. To achieve saturation of Stabilized aggregate profile, 25 to 45-gallons of water per 1-ton must be applied. During water application, test moisture penetration using a probing device reaching full depth.



Better to over water than under water

Compaction

Wait a minimum of 6-hours to a maximum of 48-hours, or until the aggregate is able to accept compaction from a 1 to 5-ton roller without separation, plowing or any other physical damage of the aggregate. The aggregate will begin to dry out and setup. Compaction can begin when you can walk on the material without sinking in significantly and material does not feel too muddy. Do not allow material to dry out completely.

If surface aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction. Compact the material with a compactor as specified below making 3 to 4 passes (do not use a vibratory unit). Upon thorough moisture penetration, compact aggregate to 85% relative compaction by equipment such as; a 1 to 5-ton double drum roller. DO NOT use a vibratory plate compactor or vibration feature on roller, as vibration separates large aggregate particles.

Installation of Stabilized aggregate more than 3" must be installed in lifts. If 4" thick compact in (2) 2" lifts. If 5" thick, compact in (2) 2.5" lifts. If Stabilized aggregate is pre-moistened before installation entire 4" or 5" lift may be installed.



Do not allow material to dry completely before rolling

Inspection

Allow aggregate to dry completely. Drying time may vary depending on amount of water used and weather conditions. Once completely dried, the surface should be smooth, uniform and solid. No evidence of chipping or cracking. Cured and compacted surface should be firm throughout profile with no spongy areas. Loose material will not be present on the surface after installation, but may appear after use. Surface should remain stable underneath the loose granite on top.

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Stabilizer will not turn the aggregate into concrete- you can still feel the crunch of the gravel under foot. It is a "natural" looking pathway, yet stable throughout and can withstand vehicle traffic and weather extremes. Any significant irregularities in surface should be repaired to the uniformity of entire installation.

Maintenance

Remove debris, such as paper, grass clippings, leaves or other organic material by mechanically blowing or hand raking the surface as needed. Any plowing program required during winter months should involve the use of a rubber baffle on the plow blade or wheels on the plow that lifts the blade 1/4" off the aggregate surface. During the first year, a minor amount of loose aggregate will appear on the surface (1/16 to 1/4"). If this material exceeds a 1/4 of an inch, redistribute the material over the entire surface. Water material thoroughly to the depth of 1", and compact with power roller of no less than 1000-lbs.

References

Stabilizer is the original natural binder in use internationally for over 26 years. Some of the worlds greatest projects use Stabilizer, here are a few:



The Royal Botanical Garden- Melbourne, Australia



The Constantine Brancusi Sculpture Garden- Tar Jiu, Romania

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The Lincoln Park Zoo, Chicago, IL USA