



Global Sealer  
Technologies

**Elephant  
Armor™**



Elephant Armor™ being line-pumped into roadway micro-trench for fiber optic cable installation, using a volumetric mixer.

***The World's Most Amazing  
Cementitious Patch and  
Overlay Product!***

**Ultra High Performance Asphalt Patch**

- Fiber reinforced: Superior flexural and tensile strength as thin as 1/4"
- High ductility, allowing the overlay or patch to 'FLEX' without failure
- Superior tensile strain capacity of other cement-based products
- 10 times the bond strength of other fiber based mortars for superior crack resistance
- Prevents the propagation of existing cracks through the surface
- Resists de-icing salts, freeze/thaw
- Highly impermeable, high abrasion resistance

# Elephant Armor™ Ultra High Performance Asphalt Patch

**Elephant Armor™ Ultra High Performance Asphalt Patch** was designed for easy and permanent asphalt patching repairs. A non-petroleum based product means an odor free, earth friendly solution to asphalt patching and repair.



**GST Elephant Armor™ Ultra High Performance Asphalt Patch** is a single component, black tinted, cementitious, fiber reinforced, medium to fast setting asphalt patch that can be placed with a trowel or textured roller. This ultra-high performance mortar can be used for asphalt patching repair work, maintenance, or new construction. It offers high early strength and superior bond strength. It is shrinkage compensated, so only very minimal shrinkage may occur. This repair mortar is able to maintain a strong resistance to de-icing salts, freeze-thaw cycles and abrasion.



**GST Elephant Armor™ Ultra High Performance Asphalt Patch** is designed for easy and permanent asphalt patching repairs. Elephant Armor's unsurpassed durability and flexibility means the repair will stand the test of time! Utilizing a non-petroleum based mortar means an odor free, earth friendly solution to asphalt patching and repairs!

**GST Elephant Armor™ Ultra High Performance Asphalt Patch** is ideal for use on asphalt walkways, driveways and roadways or anywhere a high strength, permanent asphalt repair is called for. This low slump, fiber reinforced, black tinted mortar can be troweled, shaped or molded to a minimum thickness of 1/4".

## Asphalt Patch Overlay – Vancouver, BC *Elephant Armor™ can be applied directly over broken asphalt surfaces.*



A typical "alligator skin" asphalt failure



Saw cut a groove around repair to create a hard edge



Roll on acrylic adhesive primer\*



Place Elephant Armor™, folding product into precut groove



Roll surface with a texture roller to mimic asphalt appearance



Finished repair

\*To ensure a proper bond, an adhesive/primer MUST be applied to the cleaned and prepared substrate. The primer must meet ASTM C1059 Type 1 and 2. (Visit [www.gstinternational.com](http://www.gstinternational.com) for a list of recommended primers)

# Elephant Armor™ Ultra High Performance Asphalt Patch

Asphalt Patch Overlay – Santa Rosa, CA



A typical "alligator skin" asphalt failure.



Roll on acrylic adhesive primer\*



Elephant Armor™ can be rolled and or trowelled directly over the failed surface without deconstruction.



**Finished patch ready to drive on in 1 hour**

*"Here are a couple of pictures we took while we were working with the Elephant Armor™. (see cover) Since we had no experience with it, we had a big learning day. After the 1st bucket we got the hang of it. It's easy to work with once you get the hang of it. The area came out great and we look forward to ordering more to continue making our never ending repairs in the airfield. It saved us a lot of time not having to dig out the old stuff. Thank you again for your support."*

*– Arreola, Marcos, CIV NAVFAC SE, PWD Corpus Christi*

***Specially engineered as a patch or overlay product that offers tremendous flexural and tensile performance as thin as 1/4".***

# Elephant Armor™ Ultra High Performance Asphalt Patch

## The World's Most Amazing Cementitious Patch and Overlay Product!

**Read all application instructions on the product label before you begin applying Elephant Armor**

The GST Elephant Armor™ family of Ultra High Performance Mortars is a single component, cementitious, fiber reinforced, medium to fast setting patch and overlay repair mortar that can be placed with a textured roller (preferred method) or traditional placement tools. These ultra-high performance mortars, with their high early and superior bond strength, can be used for repair work, maintenance, or new construction. Applications include: walkways, curbs, ramps, slabs, spalls, cracks, bridges, ICF walls, parking structures, tunnels, dams, industrial plants or anywhere a high strength concrete repair mortar is called for.

Elephant Armor™ is shrinkage compensated resulting in minimal shrinkage. Elephant Armor™ maintains a strong resistance to de-icing salts, freeze-thaw cycles and abrasion. These varying slump mortars can be placed to a minimum thickness of ¼”.

Elephant Armor™ Ultra High Performance Mortars can be used for structural monolithic overlays for interior and exterior applications. Elephant Armor™ can also be used as a structural underlayment for other materials such as self-levelers, trowel coats and epoxies. It has unparalleled structural flexibility and tensile strength and can be used to create seamless floors without control or expansion joints.

Elephant Armor™ Ultra High Performance Mortar, Asphalt Patch and DOT Industrial Grade Mortar are available in 50 lb (22.6 kg) bags.

Elephant Armor™ Ultra High Performance Mortar and Asphalt Patch are also available in 10 lb (4.5 kg) pails. It is pre-packaged and comes ready to use. Its ease of use is unparalleled - all you have to do is add water. These flexible repair mortars/overlays have an average yield of:

- 50 lb bags: 9.3 sq. ft. at ½” thickness; 18.75 sq. ft. at ¼” thickness, however yield in service will vary.
- 10 lb pails: 1.8 sq. ft. at ½” thickness; 3.7 sq. ft. at ¼” thickness, however yield in service will vary.

Elephant Armor™ Ultra High Performance Mortar and Asphalt Patch initial set is 20 to 60 minutes and final set is 1½ to 2 hours, depending on ambient temperature and humidity.

Elephant Armor™ DOT Industrial Grade initial set is 20 to 30 minutes and final set is 1 to 1½ hours, depending on ambient temperature and humidity.

Elephant Armor™ set time can be extended with retarders, such as GST Delay, or mixing with heated water for a faster set time.

### Specifications:

Elephant Armor™ Ultra High Performance Mortars bond to all suitable concrete, masonry, and cementitious substrates. For full depth repairs onto an aggregate base, a fixed bi-directional geogrid must be properly installed prior to application. Please refer to [www.gstinternational.com](http://www.gstinternational.com) for more details.

	Flexural Strength ASTM C 947	Splitting Tensile ASTM C 496	Compressive Strength ASTM C 109 Cube
EA Mortar	6.7 mpa (950 psi) 28 days	4.2 mpa (602 psi) 28 days	34.7 mpa (4940 psi) 56 days
EA Asphalt Patch	8.8 mpa (1259 psi) 28 days	5.9 mpa (838 psi) 28 days	45.8 mpa (6510 psi) 28 days
EA DOT	10.5 mpa (1493 psi) 7 days	7.9 mpa (1126 psi) 28 days	55 mpa (7837 psi) 28 days

Manufactured in the USA by Global Sealer Technologies International

**IMPORTANT:** Repair surfaces must be clean, sound, and free from contaminants that can act as a bond breaker (such as oil, curing compounds, acids, dirt and loose debris. GST Pro-Grade Masonry Cleaner and power washing is strongly advised in order to properly prepare the bonding surface! To ensure the proper bond, the appropriate Elephant Armor Primer MUST be applied to the cleaned and prepared substrate. These primers meet ASTM C1059 Type 1 and 2.

When placing Elephant Armor™ Ultra High Performance Mortars, all patches and overlays must have GST's Elephant Armor Cure applied immediately after finishing. If a stain or sealer is going to be applied, do not use Elephant Armor Cure, water cure for a minimum of two hours. (Visit [www.gstinternational.com](http://www.gstinternational.com) for additional information.)

Elephant Armor™ Ultra High Performance Mortars must be placed to a hard edge! Existing cracks, cold joints, saw cuts and free-standing formwork shall be finished flush at a depth of not less than ¼”. A feathered edge is not acceptable. Refer to [www.gstinternational.com](http://www.gstinternational.com) for detailed instructions.

In mixing Elephant Armor™ Ultra High Performance Mortars, stir dry contents prior to adding approximately 1¼-1½ gal. of water and thoroughly mix with a ½” drill or larger, using an egg beater, mortar or Jiffy bit. (Do not use a dry wall paddle blade). For ideal mixing, a dual shaft power mixer is recommended (example: ColloMix Xo 55 duo). Continue mixing until mixture is homogeneous, lump free and the desired consistency (slump) for your application. Actual mixing time will depend on mixer speed, shear capacity and desired consistency or flow.

**DO NOT BREATHE DUST, AVOID CONTACT WITH SKIN AND EYES!**

### Elephant Armor™ Ultra High Performance Asphalt Patch



**ANGER**



Contains: Silica CAS#1317-95-9, Aluminosilicate Glass, Calcium Sulfoaluminate Cement CAS# 960375-09-1, Cement, Portland CAS# 65997-15-1, Quartz CAS# 14808-60-7

Causes skin and eye irritation. May cause cancer. May cause respiratory irritation. Avoid breathing dust/fumes/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**IF ON SKIN:** Wash with plenty of water. If exposed, concerned or if irritation occurs, get medical advice/attention.

Call a Poison Center if you feel unwell. Store locked up. Store in well ventilated place. Dispose of contents/container in accordance with local regulations.

**GST International, Sparks , NV (775) 829-2626**

**Proposition 65:** One or more of the components contained in this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

SDS (available at [www.gstinternational.com](http://www.gstinternational.com)) for additional safety information regarding this product.

### KEEP THIS PRODUCT OUT OF THE REACH OF CHILDREN

This product is made from the finest raw materials available and manufactured to proven formulation under strict quality control for its intended use. However, results obtained with the use of this product under a variety of conditions may depend on circumstances beyond our control. GST International, Inc. and the seller therefore disclaim any responsibility for damage of any kind. The only warranty extended, expressed or implied, is for defective material.

GST International shall not be liable for any incidental, consequential or damages arising directly or indirectly from the use of Elephant Armor™.

Authorized Dealer: