



MS Gunnite

Microsilica Reinforced Gunnite

DESCRIPTION

MS Gunnite is a one-component, dry process shotcreting repair mortar designed with portland cements, fine aggregates, microsilicas and proprietary admixtures. **MS Gunnite** provides maximum strength, high density, low rebound and low sag properties for interior or exterior machine-applied concrete restoration and repairs. Also available with poly fibers.

USES

MS Gunnite is ideal for use on:

- Rock stabilization projects
- Pool construction
- Parking decks
- Tunnels
- Dam repair
- Retaining walls
- Bridge structures
- Water treatment plants
- Piers and docks

BENEFITS

- Durable: Provides long lasting repairs
- Vertical and overhead applications
- Resistant: Withstands freeze/thaw cycles
- Impermeable: Improved resistance to chloride intrusion
- Performance: Reduced rebound allows for thicker layers in one lift
- Quality: Reduces sagging and slouching
- Non-corrosive, non-metallic
- Consistent: Strict Quality Control testing and standards

SURFACE PREPARATION

All surfaces in contact with **MS Gunnite** shall be free of dirt, oil, grease, laitance and other contaminants that may act as bondbreakers. All unsound concrete should be removed to ensure a good bond. ACI recommends the area to be patched should be saturated for 24 hours before placement. Remove any standing water. Surface should be saturated, surface dry (SSD). Always apply a test patch. Maintain contact areas between 40°F (4°C) and 90°F (32°C) prior to repair and during initial curing period.

YIELD

50 lbs (22.7 kg) will fill approximately 0.43 ft³ (0.012 m³) when 3.25 quarts mixing water is used.

COVERAGE

One 50 lb (22.7 kg) bag will cover approximately 6 ft² at 1/2" thickness. Coverage may vary depending on porosity of surface.

MIXING

MS Gunnite is designed to be used with dry-process equipment and should be mixed directly at the gun. Adjust water at the nozzle for required consistency.

PLACING

MS Gunnite should be placed using established procedures according to ACI 506 "Recommended Practices for Shotcreting." Be sure not to over water. Material is best applied at an angle of 90° from a distance of 2–6 ft from the area of application. **MS Gunnite** can be effectively applied at depths of 1/2–6" in one lift. If multiple lifts are necessary, score surface to a rough texture and apply second lift after first lift has hardened.

FINISHING & CURING

Follow standard ACI curing practices. Exposed surfaces should be cured with a membrane forming curing compound such as **US SPEC Maxcure Resin Clear**, **US SPEC Hydrasheen** or **US SPEC Hydrasheen 30%**.

STORAGE

Normal cement storage and handling practices should be observed. Store material in an interior, cool, dry place. Shelf life is one year in original, unopened container.

LIMITATIONS

In addition to limitations already mentioned, please note the following. Do not apply when the surface or ambient temperature is below 40°F (4°C) or expected to fall below 40°F (4°C) within 48 hours. Do not apply over surfaces that are frozen or contain frost. Do not apply over any active faults or cracks in the substrate without addressing any movement that may occur. Allow concrete to fully cure for 28 days before use of this product. All repairs should have a minimum depth of 1/2". Setting time will speed up in hot weather and slow in cold weather. For hot and cold weather applications, contact your US SPEC manufacturer's representative.



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PHYSICAL PROPERTIES

All Physical Property testing performed in laboratory conditions of $73.5 \pm 3.5^{\circ}\text{F}$ ($23 \pm 2^{\circ}\text{C}$) and a relative humidity no less than 50% unless otherwise determined by the test method or specification. All results represent **MS Gunnite** with 3.25 quarts water unless listed otherwise. Tests are conducted under standardized conditions for comparative purposes, and results may not be representative of performance under field conditions.

Property and Test Method	Results		
Compressive Strength ASTM C109	1 Day	7 Days	28 Days
	1,000 psi (6.89 MPa)	4,000 psi (27.58 MPa)	6,000 psi (41.37 MPa)
Flexural Strength ASTM C348	28 Days 1,000 psi (6.89 MPa)		
Freeze/Thaw Resistance ASTM C666	F/T Cycles 300	Durability 97%	
Chloride Ion Resistance ASTM C1202	Age 28 Days	Penetrability <2000 coulombs	
Corrosion Resistivity	MS Gunnite tested compatible with Vector™ Corrosion Technologies Galvashield® embedded galvanic anodes.		

LIMITED WARRANTY: The manufacturer warrants that this product is free from defects in material and workmanship, and will perform per the manufacturer product literature in effect at the time of purchase. This warranty is for one (1) year from the date of purchase. Any implied warranty of merchantability or fitness for a particular purpose is limited to the duration of this express warranty. This warranty applies only if the product is used, in strict accord with the manufacturer published instructions. The sole and exclusive remedy under this warranty is replacement of the defective product or refund of the purchase price, at the manufacturer's option. **CONSEQUENTIAL, SPECIAL, AND INCIDENTAL DAMAGES ARE NOT RECOVERABLE UNDER THIS WARRANTY.** All claims under this warranty must be submitted to the manufacturer by calling 303-778-7227. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

DANGER

This product contains Crystalline Silica (CAS# 14808-60-7) and Portland Cement (CAS# 65997-15-1). Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause cancer. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust. Keep away from children. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with local/regional/national/international regulations.



WARNING: Cancer and Reproductive Harm -
www.P65Warnings.ca.gov

FIRST AID

If swallowed: Immediately call a poison center/doctor. Rinse mouth. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doc-tor if you feel unwell.

MANUFACTURER/TECHNICAL SERVICE

Contact your US SPEC manufacturer's representative for the most current product information. Always read and follow the warnings and instructions on the most current technical data sheets and safety data sheets (SDS), available online at www.usspec.com.

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