

SlabArmor™ vs. Sodium Silicates

Comparing Multiquip's patented SlabArmor™ product to Sodium Silicates (available from several manufacturers).

SlabArmor adds a multitude of benefits to fresh concrete previously only available with the addition of other chemicals or treatment methods. These include, but are not limited to densification, sealing, water retention, evaporation control, concrete hardener, dust proof, increased abrasion resistance and reduction of oil and water penetration.

Acting as curing agent, SlabArmor exceeds the minimum ASTM C309 requirements of (0.55kg/m²/72 hrs) for film forming curing agents.

These are the first non-film forming curing systems to exceed performance ASTM C309 moisture retaining requirements with verification via the use of ASTM E96 Test results for SlabArmor (0.02kg/m²/72hrs)..... The use of other curing products or processes in conjunction with SlabArmor is not needed.

SlabArmor saves you time and money. Just spray on, leave it on.

For many years silicates have been successfully applied by contractors to well-cured concrete that is dry and absorptive, reducing dusting and improving the hardness of the concrete surface. These compounds are applied at the end of the concrete cure cycle as they are not "membrane-forming" and therefore do not meet the requirements to cure concrete according to ASTM C309.

Sodium Silicates do not provide the two primary functions of a concrete curing compound:

1. Form a continuous film on the concrete surface
2. Retain moisture to promote proper cement hydration in freshly placed concrete.

MQ Whiteman SlabArmor — Typical Application Time: 15 Minutes



Apply first coat of SlabArmor Starter during float operations.



Apply two more coats during trowelling.



Trowel concrete to desired surface texture.



Applying SlabArmor Closer to complete the job. SlabArmor treatment is up to a depth of >25mm (>0.98").

Water retention, evaporation control, finishing aid, cure, densification — all in one simple process!

Sodium Silicates — Typical Application Time: 1 Hour



After the concrete floor has sufficiently hardened, Sodium Silicate is applied.



Per manufacturer's recommendation, broom and keep wet for 45 minutes.



Once the mixture forms into a gel, the unabsorbed material needs to be removed.



Unabsorbed material is washed off the slab.

The process is now complete and the slab is sealed and densified with a penetration of <3mm (<0.11").



Chemistry	SlabArmor™	Sodium Silicate
pH	Starter 6 - 9; Closer 11.6	11.3 - 11.6
Physical state	Liquid	Liquid
Relative density	>1.0	1.1889 - 1.2
Time of application	During placement, bullfloat and troweling process	After concrete has set up to walk on
Amount of product used	Pre-measured	Flooding required (excessive use of product will occur)
Requires protective clothing	NO	Wear protective gloves, wear tight sealed goggles. Breathing equipment may be required with poor circulation
Finishing aid	YES	No — install on existing concrete
Densifier	YES	YES
Sealer	YES	YES
Curing agent	YES	YES — can be used — does NOT meet ASTM C309
Retains water in concrete	YES	NO
Controls evaporation	YES	NO
Concrete hardener	YES	YES
Resists dusting	YES	YES
Resists abrasion	YES	YES
Safe, non-slip	YES	YES
Reduces oil and water penetration	YES	YES
Wait time before applying product on fresh concrete	No wait time	Can be used at any time after finishing
Application time	15 minutes	30 to 40 minutes
Drying time	Dries with concrete	2 to 3 hours
Floor Preparation prior to installation	NONE	Remove all sealers, paints, wax, coatings, floor coverings, mastics, surface contaminants, food spills
Requires additional product to remove sealers and curing compounds	NO	Yes — use recommended stripper
Requires water flushing after application	NO	YES
Forms film or may stain	NO	Yes (with improper installation)
Wash/flush from all glass and metal surfaces to avoid etching	NO	Yes, flush with water immediately
Requires second coat on porous surfaces	NO	Yes — after first coat has cleaned, rinsed and is completely dry
Product penetration into concrete surfaces	>25 mm (>0.98")	<3 mm (<0.11")
Effects of floor grinding	No effect	Will remove treated surface
Slab ready to continue construction	Minimum 3 days	Minimum 28 days to cure concrete
Contributes to surface crazing, efflorescence and surface ASR	NO — does not contain sodium or potassium slats	YES — contains sodium
Environmentally safe	YES	High pH — contact local regulatory agency for disposal of waste water
Hazardous chemical	NO	Not stated
Comments		Additional product costs and labor required

Note: Application time will depend on size of jobsite and may require additional personnel. Application time references in this comparison is the estimated total time required to complete the product installation process as recommended and stated by the manufacturers.



MQ Whiteman Concrete Solutions are environmentally neutral compositions. Finish your job secure in the knowledge these products pose no risk to crew members or the environment. A benefit on jobs with LEED requirements.

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