



# SUPERFLAT® CONCRETE ENHANCEMENT™

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## BLOCK™

A superior **moisture inhibitor** specifically designed to eliminate the potential of **vapor drive** in concrete slabs. Recommended for use whenever environmental conditions pose a potential **risk for moisture migration** or high levels of vapor emissions.

CONCRETE CURING AGENT / VAPOR EMISSION REDUCER / ELIMINATES CRAZING

Nanotechnology. Non-corrosive. Non-hazardous.

### DESCRIPTION

Superflat® Block™ is a moisture inhibitor that is specifically designed to eliminate the potential of vapor drive in concrete slabs both vertical (tilt-up) and horizontal (floor slabs). Superflat® Block™ is a simplistic, proactive approach in dealing with potential floor covering failures while providing a significant cost savings compared to topical moisture mitigation systems. It provides equal protection in vertical (tilt-up) application and eliminates the potential risk of efflorescence.

Superflat® Block™ changes the development of the capillary structure within the slab and fills unoccupied space during the curing process with a reaction that is not water soluble and can't be reversed, broken down, or converted from its solid state. The resulting finished substrate creates an environment that does not allow moisture migration from sub grade sources or topically due to design of the capillary system and the properties contained in the proprietary chemistry. Treated surfaces will keep common spills and other moisture suspended on the surface of the concrete substantially longer than untreated surfaces, making Superflat® Block™ an excellent specification for textured concrete projects.

When Superflat® Block™ is specified, minimum concrete design mixes begin at 5,000 psi. The neutrality of the chemistry makes Superflat® Block™ compatible with shrink compensation and light weight design mixes.

Superflat® Block™ consolidates concrete at higher levels than concrete that is placed without treatment of Superflat® Block™ and is chemically engineered to provide simple, quick, sustainable performance. Superflat® Block™ was developed to be an admixture blended into the concrete mix at the ready-mix plant and followed by one spray-on topical application on-site, during the finishing operation.

Superflat® Block™ will not prevent proper bond and adhesion with traditional floor covering adhesives. Concrete roughness of CSP 1 thru CSP 3 can be specified and achieved if epoxy floor systems are desired. Shot blasting, vertical milling and grinding is allowed if a rougher CSP or surface texture is required by the floor covering manufacturer before the coating is installed. This environmentally safe, water-based product features a zero VOC content and provides an attractive option in green building applications.

### USES

Superflat® Block™ is recommended for use whenever environmental conditions pose a potential risk for moisture migration or high levels of vapor emissions. Ideal applications include floors in industrial plants, distribution centers, airports and warehouses when impervious floor systems need to be installed over finished concrete. Superflat® Block™ is also used in conjunction with the Superflat® Concrete Enhancement™ family of products.

ASTM testing has been conducted on this product. Concrete floors treated with Superflat® Block™ exceed minimum requirements in accordance with ASTM C309 standards.

### COVERAGE / APPLICATION RATE: BATCH PLANT

Types of Placement	Gal/yd <sup>3</sup>	M <sup>2</sup> /Gal
Slab and Tilt-up	4	46.45-55.74

### COVERAGE / APPLICATION RATE: ON-SITE

Types of Placement	ft <sup>2</sup> /Gal	M <sup>2</sup> /Gal
Slab and Tilt-up	500	55.74



## APPLICATION 2 STEPS

Use Superflat® Block™ with approved design mixes only.

**Step 1 (Batch Plant)** Dose undiluted Superflat® Block™ at a rate of 1 gallons (11lbs.) per yd3 into the concrete mix design at a minimum of 100 revolutions and follow proper mixing ratios for other specified ingredients. Do not exceed maximum of 300 revolutions in total in the entire drum mixing operation (ASTM C94) including delivery and on-site staging.

### Revolutions per Stage:

Batch Plant - 100 (Minimum revolutions for complete mixing.)

Transport - 95 to 170

On-Site: 30 minimum (if trim water is added)

Total: Do not exceed 300 revolutions for the entire process.

**Step 2 (On-Site, during placement)** Apply Superflat® Block™ at a rate of no less than 500 square feet per gallon directly to the wet surface of the concrete with a Hudson style pump sprayer or the chemical delivery system on a ride-on power trowel machine prior to the first initial pass with pans or blades. Continue normal finishing process to the specified surface finish.

Note: Thoroughly clean and rinse contaminated chemical sprayers and vessels before filling with Superflat® Block™. The use of evaporation retardants is not permitted. If more moisture is needed at the surface during the finishing process, a light mist of clean, potable water is permitted.

**Burnishing / Sealing** Floors treated with Superflat® Block™ can be treated with Superflat® Protect™ and burnished to a high sheen. A high-speed burnisher (2000-2200 rpm) with a medium to coarse maintenance pad can be used for optimum results. Diamond impregnated pads are acceptable.

## ADDITIONAL INFORMATION

### PACKAGING

5 Gallon Pails | 55 Gallon Drum | 265 Gallon Tote  
*No expiration if left in unopened container and material does not become frozen or exceed 165° F (74° C).*

**PRECAUTIONS:** DO NOT DILUTE. Do not apply if the temperature of the concrete is less than 38° F (3° C) or above 165° F (74° C). KEEP FROM FREEZING. If frozen, discard product in approved receptacles.

**DRYING TIME:** Not applicable. Superflat® Block™ penetrates into the surface very quickly on newly placed concrete. Applied material is not film forming and will not create additional clean-up steps.

**CLEANUP:** While still wet, equipment may be cleaned easily with mild detergent and water. After 72 hours of initial placement, cleaning can begin with Superflat® Retain™.

### May help contribute to LEED credits:

- IEQ Credit: Indoor Environmental Quality
- MR Credit 5.1: Regional Materials: 10% Extracted, Processed & Manufactured Regionally
- MR Credit 5.2: Regional Materials: 20% Extracted, Processed & Manufactured Regionally
- ID: Innovation & Design Process
- IO: Innovation in Operations

## SPECIFICATIONS

- Complies with all State and Federal allowable VOC requirements. Treated surface passes the minimal ANSI Static Coefficient of Friction (SCOF) standards
- Increases workability % during placement
- Dosing must be performed at batch plant
- Eliminates crazing
- No need for wet cure systems
- Compatible with all floor coverings and adhesives

## FEATURES / BENEFITS

- Chemical reaction is an integral process that remains throughout the slab
- Significantly reduces the amount of moisture loss at time of placement to drastically increase workability times
- Quick, easy, hassle-free application procedure
- No lengthy dwell times required
- Will not slow down the finishing process
- Increases PSI by 40% on average
- May be used as a finished floor system for factories / warehouses
- Designed to be used as a complete maintenance program
- Compatible with shake hardener applications
- Ready to use formulation / no mixing required
- Convenient for interior and exterior use
- Environmentally safe, non-hazardous
- No VOC'S

**HEALTH HAZARDS:** Superflat® Block™ is non-combustible. (Flash point is >210° F.) Direct contact will result in irritation of the skin and eyes. Inhalation of product mist may result in respiratory irritation. Refer to current SDS for complete health and safety information.

**LIMITED WARRANTY:** Superflat® warrants, at the time and place we make shipment, that our material will be of good quality and will conform with our published specifications in force on the date of acceptance of the order. Read complete warranty. Copy furnished upon request.

**DISCLAIMER:** The information contained herein is included for illustrative purposes only, and to the best of our knowledge, is accurate and reliable. Superflat® cannot however under any circumstances make any guarantee of results or assume any obligation or liability in connection with the use of this information. As Superflat® has no control over the use to which others may put its products, it is recommended that the products be tested to determine if suitable for specific application and/or our information is valid in a particular circumstance. Responsibility remains with the architect or engineer, contractor and owner for the design, application and proper installation of each product. Specifier and end user shall determine the suitability of products for specific application and assume all responsibilities in connection therewith.

For our most current data sheets, please visit [www.getsuperflat.com](http://www.getsuperflat.com).