



## Technical Data Sheet (TDS)

### Product Name

**Flex-C-Ment™ Overlay Mix**

### Manufacturer

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### 1. Description:

Flex C Ment Overlay Mix is a polymer modified cement based product formulated for resurfacing sound and stable concrete floors and exterior hardscapes. This cement based dry mix is designed for the most severe wear applications, interior or exterior. Formulated to resist troweling air blisters and shrinkage cracks. Balanced with additives to enhance curing in temperature extremes. Overlay Mix is used on concrete floor applications and as the top coat when re facing surfaces. A few interior examples would include, kitchen, dining room, bathroom, and foyer with realistic stone, brick and tile designs. A few exterior examples would include, sidewalks, driveways, porch, patios and swimming pool decks properly applied to clean and sound concrete, Flex C Ment Overlay is freeze/thaw resistant after its 28 days of curing period.

### 2. Limitations:

Flex C Ment Overlay Mix is formulated for use over thoroughly clean, structurally sound, and non-moving substrates. Surface preparation is required. If substrate is new concrete, it must be fully cured before applying the product. Minimum applied thickness is 10 mm in a single application. Do not install product if ambient and substrate temperatures are not between 5°C and 35°C, unless site conditions can be modified to correct for temperature extremes.

Overlay Mix should not be installed in areas subject to steel wheel traffic, strong chemicals, periodic water immersion, or hydrostatic pressure. The cured overlay surface should be sealed for ease of cleaning, particularly on interior floors. Extend existing substrate control joints up through the overlay to minimize random cracks in the overlay. Random cracks in the existing substrate may transfer through the cured overlay even if they are repaired prior to application.

### 3. Packaging:

Flex C Ment Overlay is available in 27,2 kg bags.

SHELF LIFE: 6 months in original, unopened package, in dry storage.

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#### **4. Coverage:**

The coverage rates of one bag of Overlay mix is approximately 1,3 sqm at 10 mm thickness. Coverage will vary depending on the depth of installation, substrate texture, and method of application and finishing. When imprinting Overlay with Flex C Ment Stamping Tools, the overlay should be applied at a thickness equal to the depth of the mortar joint that will be imprinted with the stamping tool. Material applications that are too thin or too thick may not allow for the accurate transfer of pattern and texture into the overlay product.

#### **5. Substrate Preparation:**

Remove all potential bond breakers such as grease, oil, paints, sealants, drywall taping compound, mastics and other contaminants on the surface. If it is new concrete, it must be fully cured and free from curing and sealing compounds, laitance, or dusting. Slick, hard-troweled floors must be opened and roughened. Random cracks must be repaired, but may still transfer through the cured overlay. Surface preparation may include high pressure washing, grinding, scarifying, shot blasting, or sandblasting, depending on the type of residue being removed and surface profile required. Failure to remove all contamination that impedes the adhesion of Overlay Mix will cause the topping to delaminate. Detergents or soaps should not be used since they may leave a surface residue. Do not acid etch as it may weaken the surface. Unsound concrete must be removed down to sound concrete.

#### **6. Mixing:**

Prior to mixing, store all materials in a shaded or cool environment. Chilling the water is advisable during hot weather. Mix and install when ambient temperatures are between 5°C-35°C. Use 3,5-4 lt of potable water per 1 bag of Flex C Ment Overlay Mix. When temperature or humidity affect water demand, make small adjustments to the amount of mixing water as needed to achieve proper working consistency. Do not over water. Measure the water accurately and consistently from batch to batch. Always add water to the container first. Continue to mix for a minimum of 3 minutes until a smooth, uniform, lump-free consistency has been achieved. If mixture loses its plasticity, do not retemper with water or add previously mixed material to new batches.

#### **7. Installation:**

If it is a concrete substrate, mark the location of all working joints, in order to saw cut joints through the overlay exactly over those existing joints. The overlay joints must be full depth and as wide as the existing substrate joints. All repair and patching compounds must be fully cured before applying Flex C Ment Overlay Mix and Primer 100. Minimum applied thickness is 10 mm in a single application.

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Note: When repair and patching compounds are used, creating a test area using the patch compounds with Overlay mix is recommended to ensure a similar absorption rate is achieved, otherwise ghosting may occur. For thicker applications, allow material to dry for 8 hours after placement and then apply a second layer. Place additional layers in the same manner. Do not apply Overlay Mix over standing or visible moisture on the primed surface.

Always maintain a wet edge during application. Terminate pours at existing joint lines, walls or other fixed objects. If a pour is terminated in the center of the floor or at a doorway between rooms for example, delineate the stopping point with a bulkhead form.

**7.1. Trowel Application:** Once material is thoroughly mixed, immediately pour Overlay Mix from the mixing pail onto the concrete surface. A pool trowel or Fresno may be used to distribute the product. Similarly, a gauge rake can be used to distribute the overlay to a specific and consistent depth before lightly finishing with a pool trowel. This is particularly important when the Overlay Mix will be stamped with Flex C Ment Stamping Tools. Keep tools free of build up by cleaning frequently with water before the Overlay Mix dries completely. Apply material at a consistent thickness to minimize random shrinkage cracking. Do not overwork the surface with the pool trowel. Do not hard trowel Overlay Mix. Finishing time will vary with temperature, wind, humidity, use of a primer or an evaporation retarder. Do not mix or apply more material than can be handled effectively for the installation. If the surface finish of the overlay is not satisfactory, scrape and remove the problem area before it starts to dry and then reapply the overlay. Note: The reapplied material may be visually different from the surrounding surface.

**7.2. Stamping or Texturing:** Place or distribute freshly mixed Overlay Mix material by pool trowel or gauge rake over properly prepared concrete substrate. A gauge rake is strongly recommended in order to achieve a consistent depth to receive the pattern and texture. Imprinting time will vary widely depending on temperature, humidity and overlay thickness. Begin stamping as soon as mixture has set sufficiently to achieve a clean impression, usually 20 to 60 minutes after placement. Apply Flex C Ment Liquid Release to the area prior to placing stamps or using texture rollers. Existing control joints should be mapped out prior to placement of the Flex C Ment Overlay Mix and re-cut before cracking occurs. Protect Overlay application from rain for 24 hours after placement.

**8. Curing:** Flex C Ment Overlay is self-curing. However, during hot weather or windy conditions polyethylene sheets may be used to minimize plastic shrinkage cracking. The method of curing may

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affect the final color of Overlay. Verify curing method and timing with a mock-up. Once the curing method has been determined, utilize consistently throughout the installation. Curing time varies with ambient and substrate temperatures, and humidity. The surface can be walked on gently approximately 8 hours after placement at 21°C. Cure for a minimum of 96 hours before opening the surface to automobile traffic. A full 28-day cure is required before heavy traffic or exposure to freeze/thaw cycling. Control joints are required. Saw cutting of control joints directly over the existing control joints in the concrete substrate should be completed within 14 hours after installation, once the surface has gained adequate strength so as not be damaged by the saw cutting process. Cool ambient and surface temperatures may delay sawing.

**9.Repair:** Damage to the overlay surface should be repaired with Overlay Mix. Once the cause of the damage has been determined and corrected, the deteriorated area should be cut and chipped to the depth of 3-5 mm. If damage to the underlying concrete exceeds the maximum allowable thickness of 10 mm, use a suitable patching compound to repair the concrete, prior to the application of Overlay Mix or apply Overlay Mix in multiple applications, not exceeding 10 mm in a single application. The repair cavity should be chipped to a uniform depth to minimize random shrinkage cracking in the repair materials. The perimeter of the repair cavity should be saw cut or chipped out to prevent feather edging of the patching compound. All dust and contamination should be removed before application of Overlay Mix. The repaired area may appear differently than adjacent surfaces.

WARNING: HARMFUL IF INHALED. THIS PRODUCT CONTAINS SILICA (CRYSTALLINE QUARTZ) AND PORTLAND CEMENT. DO NOT BREATHE DUST. PROLONGED EXPOSURE CAN RESULT IN SILICOSIS. USE WITH ADEQUATE VENTILATION. PORTLAND CEMENT IS IRRITATING TO EYES AND SKIN AND MAY CAUSE ALKALI BURNS. ALWAYS USE PROTECTIVE GLASSES, GLOVES AND DUST MASK (NIOSH/MSHA TC-21C APPROVED). IMMEDIATELY AFTER USE WASH ANY AREA OF EXPOSED SKIN. IF CONTACT IS MADE WITH EYES FLUSH THOROUGHLY WITH WATER, DO NOT RUB. IF INHALED, MOVE TO FRESH AIR. IF SYMPTOMS DEVELOP OR PERSIST, OR IF INGESTED, SEEK MEDICAL ATTENTION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN AND ANIMALS. DISPOSE OF ALL RESIDUAL MATERIALS ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS. READ THE MATERIAL SAFETY DATA SHEET BEFORE USING OR HANDLING THIS PRODUCT.

LIMITED WARRANTY AND DISCLAIMER – EXCLUSIVE REMEDY: DBS warrants that this product conforms to its published specifications when it is shipped. THIS LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY AND THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED,

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INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. DBS does not warrant any particular method of use or application of the product or its performance under any particular condition. DBS is not liable for consequential damages or personal injury arising from the use, storage or handling of this product

### 10. Declared Performance

#### Overlay Mix Grey

Essential Characteristics	Performance			Harmonized Testing Procedure
	1	2	Mean value	
Consistency – flow table test (mm)	224	221	<b>223</b>	SIST EN 1015-3
Dry bulk density (kg/m <sup>3</sup> )	1900	1900	<b>1900</b>	SIST EN 1015-6
Air bubble contents (vol.%)	11.0	11.0	<b>11.0</b>	SIST EN 1015-7

Essential Characteristics	Performance				Harmonized Testing Procedure
	1	2	3	Mean value	
Bending strength (N/mm <sup>2</sup> )	5.5	5.8	5.8	5.7	EN 1015-11
Compressive strength (N/mm <sup>2</sup> )	23.4	24.4	24.3	23.4	EN 1015-11

Essential Characteristics	Performance					Harmonized Testing Procedure
	1	2	3	4	5	

Water absorption w (kg/m <sup>2</sup> h <sup>0.5</sup> )	0.135	0.118	0.095	0.074	0.115	<b>0.11</b>	EN 1062 - 3
Thickness of application d (mm)	7.9	7.7	7.2	10.2	6.8	<b>8.0</b>	EN 1062 - 3
Classification according to SIST EN 1062 - 3	<b>Class II (medium water absorption)</b>  (0.1 < w < 0.5)						

Where pursuant to Article 37 or 38 the Specific Technical Documentation has been used, the requirements with which the product complies: **Non applicable**

## 11. Declared Performance

### Overlay Mix White

Essential Characteristics	Performance			Harmonized Testing Procedure
	1	2	Mean value	
Consistency – flow table test (mm)	183	181	<b>182</b>	SIST EN 1015-3
Dry bulk density (kg/m <sup>3</sup> )	1920	1920	<b>1920</b>	SIST EN 1015-6
Air bubble contents (vol.%)	9,5	10,0	<b>10,0</b>	SIST EN 1015-7

Essential Characteristics	Performance				Harmonized Testing Procedure			
	1	2	3	Mean value				
Bending strength (N/mm <sup>2</sup> )	7,4	7,1	6,2	<b>6,9</b>	EN 1015-11			
Compressive strength (N/mm <sup>2</sup> )	42,4	43,2	44,9	47,8	46,9	49,7	<b>45,8</b>	EN 1015-11

Essential Characteristics	Performance					Harmonized Testing Procedure
	1	2	3	4	Mean value	

Water absorption w (kg/m <sup>2</sup> h <sup>0,5</sup> )	0,331	0,227	0,167	0,350	<b>0,27</b>	EN 1062 - 3
Thickness of application d (mm)	8,7	9,8	9,7	10,1	<b>9,6</b>	EN 1062 - 3
Classification according to SIST EN 1062 - 3	<b>Class II (medium water absorption)</b>  (0.1 < w < 0.5)					

Where pursuant to Article 37 or 38 the Specific Technical Documentation has been used, the requirements with which the product complies: **Non applicable**