ASHDEK *Technical Report*

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DESCRIPTION

AshDek is a 100% acrylic waterborne coating system utilizing a pre-formed fiber-paper or plastic stencil to define a brick or stone pattern on an asphalt or concrete surface.

AshDek is a three component system consisting of Top Coat (tint-base), STARDEK II (colorant), Primer/Sealer (acrylic primer and sealer).

AshDek can be applied to new as well as existing concrete and asphalt surfaces.

MATERIALS AND PERFORMANCE

Composition, Handling and Performance Characteristics

This section covers the composition, handling and application characteristics for ASHDEK. Coatings used with this surfacing system must meet the minimum characteristic and performance properties described in the following characteristics and performance specifications.

ASHDEK TOP COAT (TINT BASE)

PERFORMANCE REQUIREMENTS

Test	Requirement
Dry Time (to re-coat) @ 50ºF (10ºC)	50 min.
Dry Time (to re-coat) @ 90ºF (32ºC)	30 min.
85% Cure (to permit traffic) @ 50ºF (10ºC)	6 to 8 hours
85% Cure (to permit traffic) @ 90ºF (32ºC)	2 to 4 hours
ASTM 2486 Scrub Resistance (30 dry mils) Applied as per manufacturer's specifications	5000 cycles to max loss of 50% coating thickness
Dry mil build thickness per coat	15 to 17 mils
Temp. limits for service	-35F to 145ƒF

Material Composition, Handling, and Application Characteristics

Characteristics	Requirement
Resin	waterborne latex
% Solids by weight	>80%
% Solids by volume	>65%
Weight per gallon	13.5 lbs/gal
% non-reactive fillers	<40%
Volatile Organic Compounds	<75 g/l or ¼ lb/gal
Boiling Range	147ƒ-477ƒF
Vapor Density	Heavier than air
Liquid Density	1.5-1.7 kg/l @ 20ƒC
Flashpoint ASTM D 3278	>201ƒF
Flashpoint ASTM D 3278	>201ƒF
Hazardous Ingredients	None
Viscosity @ 70ƒF (20ƒC)	100-110 kU
Mix Ratio (Coating : LiquidTint) gal/pints	5 gal : 1 pint
Dry mil thickness per coat	15 to 17 mils
Number of coats to achieve rec. thickness	3 coats

STARDEK II COLORANT (ASHDEK COLORING SYSTEM)

The coloring system Stardek II colorant shall consist of no less than 95% pure inorganic iron oxide pigments in a waterbase liquid carrier. Pigment particle size (fineness) must pass 95% minus 325 mesh. Colorant must be alkali resistant, water insoluble, inert, light resistant, inorganic, and lime-proof.

SEALER Seal with Stardek II Waterbase or Solvent base sealer.

Primer/Sealer is waterbased 100% acrylic waterborne.

Material Composition, Handling, and Application Characteristics

Characteristics	Requirement
Resin	waterborne latex
% Solids by weight	>30%
% Solids by volume	>29%

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Weight per gallon	8.5 lbs/gal
% non-reactive fillers	<0%
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Characteristics	**Requirement**
Volatile Organic Compounds	<45 g/l or 1/10 lb/gal
Boiling Range	147ƒ-477ƒF
Vapor Density	Heavier than air
Flashpoint ASTM D 3278	>201ƒF
Flashpoint ASTM D 3278	>201ƒF
Hazardous Ingredients	None
Viscosity @ 70ƒF (20ƒC)	44> kU
Mix Ratio (Primer : Water)	1 primer : 1 water
Mix Ratio (Sealer : Water)	1 sealer : 2 water
Dry mil thickness per coat	1 to 2 mils
# or prime coats to achieve rec. thickness	1 coat
# of sealer coats to achieve rec. thickness	1 coat

PERFORMANCE REQUIREMENTS

Test	Requirement
Dry Time (to re-coat) @ 50ºF (10ºC)	50 min.
Dry Time (to re-coat) @ 90ºF (32ºC)	30 min.
85% Cure (to permit traffic) @ 50ºF (10ºC)	6 to 8 hours
85% Cure (to permit traffic) @ 90ºF (32ºC)	2 to 4 hours
ASTM 2486 Scrub Resistance (3 wet mils)	500 cycles
Dry mil build thickness per coat	1 to 2 mils
Temp. limits for service (of cured material)	-35F to 145ƒF

FIBER-PAPER AND PLASTIC STENCILS

Stencils shall be made of water-resistance fiberboard, plastic coated and a minimum of 22-mil thick. All stencils shall arrive on site in unopened packaging in new condition. Stencils shall be secured to the substrate with an adhesive back or by randomly placed removable putty. Pattern and grout-line width shall be approved by the owner prior to tender closing.

Plastic stencils shall be made of reusable 125-mil flexible plastic, allowing the stencil to follow any contour of the surface. Pattern and grout-line width shall be approved by the owner prior to tender closing.

ASPHALT WARNING

Unlike concrete, asphalt can be extremely unstable. If the asphalt is thin, extremely cracked, crumbling, has grass growing through it or is unstable in any other way – WALK OFF THE JOB! This is not a cure for all bad surfaces, it is just a decorative topping that performs extremely well over good, stable, asphalt.

DELIVERY, STORAGE AND HANDLING

Packaging and Labeling

All ASHDEK surfacing products shall be packed in standard closed containers. Each container of separately packaged component shall be clearly and durably labeled to indicate the manufacturer's batch number, quantity, color, component identification and designated name or formula specification number together with special instructions.

Delivery, Storage and Handling

ASHDEK Commercial surfacing products shall be delivered in sealed containers that plainly show the designated name, batch number, and color. Store the material on site in enclosures, out of direct sunlight in a warm, ventilated and dry area at room temperature; do not allow coating to freeze. Care shall be taken in handling of coating containers to prevent puncture, inappropriate opening or other action, which may lead to product contamination. No materials that are past the coating manufacturer's recommended shelf life shall be used without the approval of the coating manufacturer.

SURFACE PREPARATION

Cleaning

Sweep using mechanical brooming device, or stiff bristle hand broom. Scrape and blow fine sand and debris off of surface. Pressure washing may be necessary to remove bonded debris. Use

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a non-solvent based degreaser to remove stains. Spray degreaser on stained area and let stand for 15 minutes. Using a stiff broom or brush, agitate the stained area to remove stain and rinse with water. Repeat this procedure on severe stains. Thoroughly rinse the area and let dry for 24 hours.

Repair Damaged Asphalt

Damaged and cracked asphalt shall be repaired by heating damaged area until the asphalt cement is in a liquid state (ensuring asphalt does not exceed 375ƒF), turning over and mixing in new fresh asphalt if necessary to ensure repair is level with adjacent area. Infrared type heating mechanisms are the recommended tool for this procedure.

Preparation of New Asphalt

New asphalt surfaces shall be allowed to cool after final compaction roll to less than 140ƒF before applying coating. Asphalt mix design shall be specified by a qualified Pavement Engineer and shall be designed for the purpose of the application.

Concrete Crack Repair

Grind crack (chase crack) using a diamond crack chasing blade to minimum ½" in depth and ¼" in width. Blow clean and fill crack with Sika-Flex® concrete joint filler. Fill to within 1/8" of surface and apply sand on top of Sika-Flex® to allow mechanical bond to coating. Remove excess sand once Sika-Flex® has cured.

APPLICATION

Environmental Conditions

Surfaces should be dry for at least 24 hours prior to applying ASHDEK coatings. 50ƒF is the recommended minimum air and surface temperature. The temperature of the asphalt surface must be at least 5ƒF above the dew point temperature during and after applying coating. Coating application must be complete at least two hours before sunset to allow for proper cure.

Setting Stencils

Stencils shall be placed on asphalt surface, overlapped on grout-line repeats and stapled or taped to secure. Small beads of putty (poster putty) shall be used to fasten paper stencils to the substrate.
Stencil patterns are to be centered providing similar brick sizes on the outer edges of the project. Hand taped grout-lines are to be taped using Stardek II tape.

Masking

Mask all adjacent areas using paint-grade masking tape. Use duct tape on concrete and asphalt surfaces. Building paper extended a minimum of 48 inches beyond the edge of coated area is required to prevent over-spray of coatings onto adjacent areas.

Spray Equipment

STARDEK Dual Tank Sprayer or
Makita Compressor and Spraying Mantis Texture Gun

Mixing Base Coat

See instructions.

COATING THICKNESS

Standard Thickness. The applied thickness of the coating shall be determined according to the application as noted in table 5. The owner may specify a greater thickness if so desired.

REQUIRED FILM THICKNESS

Application	Film Thickness
Prime Coat	5 wet mils (1 dry mil)
Base (grout color) coat	25 wet mils (20 dry mils)
First (top coat) coat	30 wet mils (25 dry mils)
Second (top coat) coat	30 wet mils (25 dry mils)
Seal Coat where applicable	5 wet mils (1 dry mil)

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