SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

I. GENERIC TYPE AND DESCRIPTION: Bio-Dek “Butterr” Ultra Lightweight Underlayment Date: 4/3/2020

Specification Number: MIL-PRF-3135H & MIL-PRF-32584

NOTE: For Type/Grade/Class/Application information see QPD-Type I,II, and III, class 2, grades A and B & Type V, Class 1&2, Grade A, Coposition E

II. MANUFACTURERS DATA:

(a) MANUFACTURER: BIO-DEK LLC, 2827 Andrew Ave., Pascagoula, MS 39567

(b) PRODUCT DESIGNATION: Bio-Dek Butterr Ultra Lightweight Underlayment

(c) COLOR(S): Opaque light tan

(d) USES: Fair & leveling compound

(e) TECHNICAL SERVICE REPRESENTATIVE: Murray DuBourdieu 714-975-0898

III. PROPERTIES:

(a) PERCENT VOLUME SOLIDS (ASTM D2697): 100 %

(b) PERCENT WEIGHT SOLIDS (ASTM D2369): 100 %

(c) FLASH POINT (Click here to enter text):

Part A (Resin): >302 °F (>150 °C)

Part B (Hardener): >302 °F (>150 °C)

Part C (Aggregate): >302 °F (>150 °C)

(d) WEIGHT PER VOLUME (ASTM D1475):

Part A (Resin) 9.4 lb/gal (1127 g/L)

Part B (Hardener) 9.17 lb/gal (1099 g/L)

Part C (aggregate) 3.39 lb/gal (406 g/L)

(e) PERCENT EDGE RETENTION, IF REQUIRED BY APPLICABLE SPECIFICATION (N/A): Click here to enter text %

(f) SHELF LIFE: 24 Months

(g) VISCOSITY (Click here to enter text):

Part A : 2000 cps @ 21 °C (70 °F)

Part B : 2500 cps @ 21 °C (70 °F)

Part C : N/A - solid n/a °C (n/a °F)

(h) PACKAGING: Part A resin in gallon can, Part B hardener in1 gallon can, Part C aggregate in a bag, 2 full kits of liquid (A&B) provided in a box, bags provided separately

(i) NUMBER OF COMPONENTS: 3

(j) GLOSS (ASTM D523): N/A GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 50 °F (10 °C) MIN. 90 °F (32 °C) MAX.

ADDITIONAL PAINT STORAGE REQUIREMENTS: Bags of aggregate should be stored in dry, controlled environment. Liquids should be left closed untl use

(l) VOLATILE ORGANIC COMPOUNDS (VOCS- EPA TEST METHOD 24): <.04 lb/gal (<5 g/L)

(m) WEIGHT PER AREA OF DRY FILM AT 1 MIL THICKNESS: .0039 lb/sq. ft. (19 g/m²)

(n) SPECIAL PROPERTIES:Low odor, Bio-renewable formulation that is very easy to apply and seal

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: clean, dry and free of lose particulate, designed to be applied over wet or cured and properly prepared BioDek Grip Coat

(b) TOUCH-UP CLEANLINESS: same as initial

(c) PROFILE (1): 1 mils MIN. 3 mils MAX.

(d) SPECIAL INSTRUCTIONS: temperature will effect the working time and dry to full cure, if applied over wet grip coat profile is not necessary

(e) PRIMER REQUIREMENTS: designed to apply over wet grip coat. If grip coat is fully cured make sure it has a 1-3 mil profile and is tightly adhearing

(f) MAXIMUM ALLOWABLE CONDUCTIVITY (Click here to enter text):

Refer to NAVSEA Standard item 009-32

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: designed to apply over wet grip coat. If grip coat is fully cured make sure substrate has a 1-3 mil profile and is tightly adheared

SPECIAL SAFETY PRECAUTIONS:
refer to MSDS

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: 1.5:1:15 hardener:resin:aggregate
BY VOLUME: 1.5:1:15 hardener:resin:aggregate

(b) INDUCTION TIME: N/A Minutes

(c) RECOMMENDED CLEANING SOLVENT (NO THINNING ALLOWED): alcohol, acetone, xylene

(d) POT LIFE:Click here to enter text

1.3 Hours @ 70 °F (21 °C)

Graphs included on page: Click here to enter text

(e) SPECIAL INSTRUCTIONS: Click here to enter text

VI. APPLICATION:

(a) ENVIRONMENTAL LIMITATIONS:

SUBSTRATE TEMPERATURE: 50°F (10°C) MIN. 90°F (32°C) MAX.
AMBIENT TEMPERATURE: 50°F (10°C) MIN. 90°F (32°C) MAX.
DIFFERENCE ABOVE THE DEW POINT: 5 °F (3 °C)
MAXIMUM PERCENT RELATIVE HUMIDITY: 90 %

(b) FILM THICKNESS (SSPC PA2-73T): PER COAT:

60 mils WET MIN. 3000 mils WET MAX.
60 mils DRY MIN. 3000 mils DRY MAX.

TOTAL SYSTEM:

60 mils DRY MIN. 3000 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

4 Hours @ 80 °F (27°C)
5 Hours @ 70 °F (21°C)
10 Hours @ 60 °F (15.5°C)

Maximum Overcoat Window:

n/a Click to select time Interval @ Click here to enter text °F (Click here to enter text°C)
n/a Click to select time Interval @ Click here to enter text °F (Click here to enter text°C)
n/a Click to select time Interval @ Click here to enter text °F (Click here to enter text°C)

Dry to Handle:

4 Hours @ 80 °F (27°C)
5 Hours @ 70 °F (21°C)
10 Hours @ 60 °F (15.5°C)

Dry to Service:

48 Hours @ 80 °F (27°C)
72 Hours @ 70 °F (21°C)
96 Hours @ 60 °F (15.5°C)

Graphs included on page Click here to enter text or additional information included on page Click here to enter text

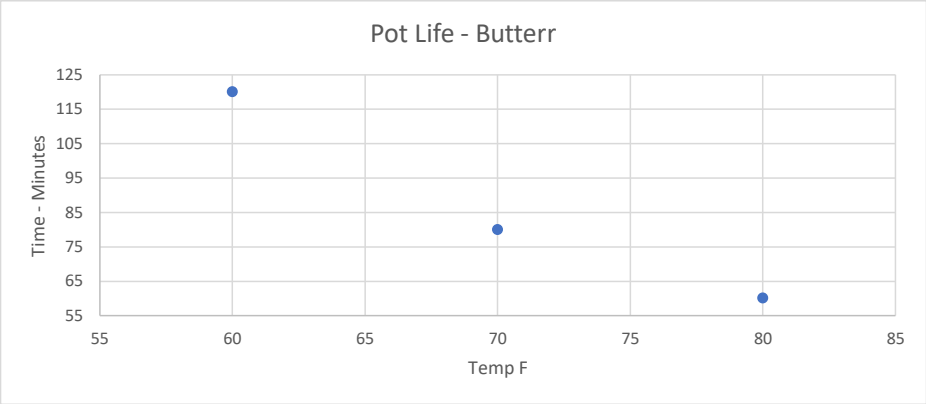
(d) EQUIPMENT REQUIREMENTS: small jiffy blade for mixing and low speed drill for mixing liquids. Large concrete mixing blade or equipment for blending liquid with aggregate. A large (10-15 gallon min. tub for mixing) is recommended. Material is applied by trowel to desired thickness necessary to fair and level surface or for cove basing.

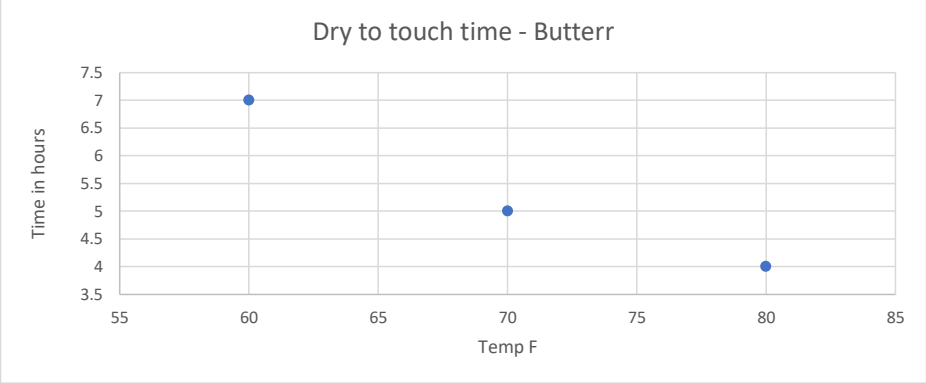
(e) SPECIAL INSTRUCTIONS: Click here to enter text

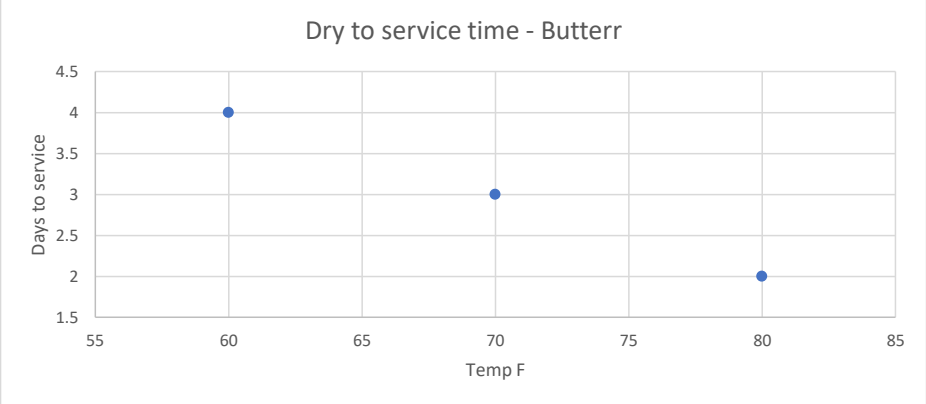
IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR CRITICAL APPLICATIONS: If critical window has been exceeded, surface should be sanded to 1 matte 1-3 mil profile before applying next step

IF OVERCOAT WINDOW HAS BEEN EXCEEDED FOR NON-CRITICAL APPLICATIONS: If critical window has been exceeded, surface should be sanded to a matte 1-3 mil profile before applying next step

GRAPHS FOR POT LIFE AND CURE TIMES:







ADDITIONAL DATA/INSTRUCTIONS:

I. GENERIC TYPE AND DESCRIPTION: 100% solids, low odor epoxy material designed to fair and level a deck or floor

II. MANUFACTURERS DATA: Click here to enter text

III. PROPERTIES: Click here to enter text

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS: Designed to be applied over BioDek grip coat. If Grip coat is fully cured, sand in a 1-3 mil. Surface profile. Surface must be clean, dry and free from flaking particulate

V. MIXING PROCEDURES: To apply, mix BIO-DEK Butterr Part A with BIO-DEK Butterr Part B using a mechanical mixer and jiffy blade for 1.5 minutes in a separate container. Be careful to scrape the sides of the original cans when transferring to the larger mixing container. Blend BIO-DEK Butterr Aggregate Part C into the liquid portion immediately using an concrete mixing blade until mixture is wet and homogenous.

VI. APPLICATION: apply by Steel trowel to desired thickness