

ASTM F 718
SHIPBUILDERS AND MARINE PAINTS AND COATINGS PRODUCT/PROCEDURE DATA SHEET

I. GENERIC TYPE AND DESCRIPTION: **BIO-DEK™ Bio-Flex** Date: 11/01/2025
Specification Number: MIL-PRF-32584

NOTE: For Type/Grade/Class/Application information see QPD- **Type IV, Class 1&2, Grade A, Composition E**

II. MANUFACTURERS DATA:

(a) MANUFACTURER: BIO-DEK LLC, 2811 Andrew Ave., Pascagoula, MS 39567

(b) PRODUCT DESIGNATION: **BIO-DEK™ Bio-Flex**

(c) COLOR(S): various

(d) **USES: a seamless decorative leveling material and waterproof membrane**

(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) 9.12 lb/gal (1093 g/L)

Part B (Hardener) 8.23 lb/gal (986 g/L)

Part C (Aggregate) 5.68 lb/gal (680 g/L)

(e) PERCENT EDGE RETENTION, IF REQUIRED BY APPLICABLE SPECIFICATION (N/A): **N/A**

(f) SHELF LIFE: 24 Months

(g) VISCOSITY ([Click here to enter text](#)):

Part A (Resin) : 1000 cp @ 70 °C (21 °F)

Part B (Hardener) : 900 cp @ 70 °C (21 °F)

Part C (Aggregate) : N/A

(h) PACKAGING: resin is supplied in the bottom of a 5 gallon plastic pail, hardener is in top pail-liner of the same bucket,
aggregate is provided in separate, heat sealed bag

(i) NUMBER OF COMPONENTS: 3

(j) GLOSS (ASTM D523): 40-80 @ 60degrees GU

(k) STORAGE REQUIREMENTS: TEMPERATURE: 50 °F (10 °C) MIN. 90 °F (32 °C) MAX.
ADDITIONAL PAINT STORAGE REQUIREMENTS: do not open prior to 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: .00538 lb/sq. ft. (26.28 g/m²)

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(n) SPECIAL PROPERTIES: Semi self leveling material serves as a leveling agent and a waterproof membrane

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS:

(a) INITIAL CLEANLINESS: clean, dry and free of loose particulate.

(b) TOUCH-UP CLEANLINESS: same as initial

(c) PROFILE (1): 1 mil min. profile

(d) SPECIAL INSTRUCTIONS: temperature will effect the working time and dry to full cure

(e) PRIMER REQUIREMENTS: not required, but can be used over tightly adhering primer with min. of 1 mil profile

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

Refer to NAVSEA Standard item 009-32

(g) MAXIMUM DEGREE OF FLASH RUSTING ALLOWED: Surface shall be cleaned to a matte finish with at least 95% of the surface area free of all previously existing visible residues and the remaining 5% containing only randomly dispersed stains of rust, coatings, and foreign matter

SPECIAL SAFETY PRECAUTIONS:
refer to MSDS

V. MIXING PROCEDURES

(a) MIXING RATIOS BY WEIGHT: 3:1:1.27 resin:hardner:aggregate
BY VOLUME: 2.7:1:1.4 resin:hardner:aggregate

(b) INDUCTION TIME: N/A Minutes

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

(d) POT LIFE: 1 Hour @ 70 °F (21 °C)

Graphs included on page: 4

(e) SPECIAL INSTRUCTIONS:

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: 4 mils WET MIN. 2000 mils WET MAX.

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TOTAL SYSTEM:

4 mils DRY MIN. 2000 mils DRY MAX.

(c) DRY TIMES (ASTM D1640):

Minimum Overcoat Window:

5 Hours @ 85 °F (29°C)
10 Hours @ 70 °F (21°C)
15 Hours @ 62 °F (17°C)

Maximum Overcoat Window:

24 Hours @ 85 °F (29°C)
36 Hours @ 70 °F (21°C)
48 Hours @ 62 °F (17°C)

Dry to Handle:

5 Hours @ 85 °F (29°C)
10 Hours @ 70 °F (21°C)
15 Hours @ 62 °F (17°C)

Dry to Service:

n/a [Click to select time Interval @ 85 °F \(29°C\)](#)
n/a [Click to select time Interval @ 70 °F \(21°C\)](#)
n/a [Click to select time Interval @ 62 °F \(17°C\)](#)

Graphs included on page [Click here to enter text](#) or additional information included on page [Click here to enter text](#)

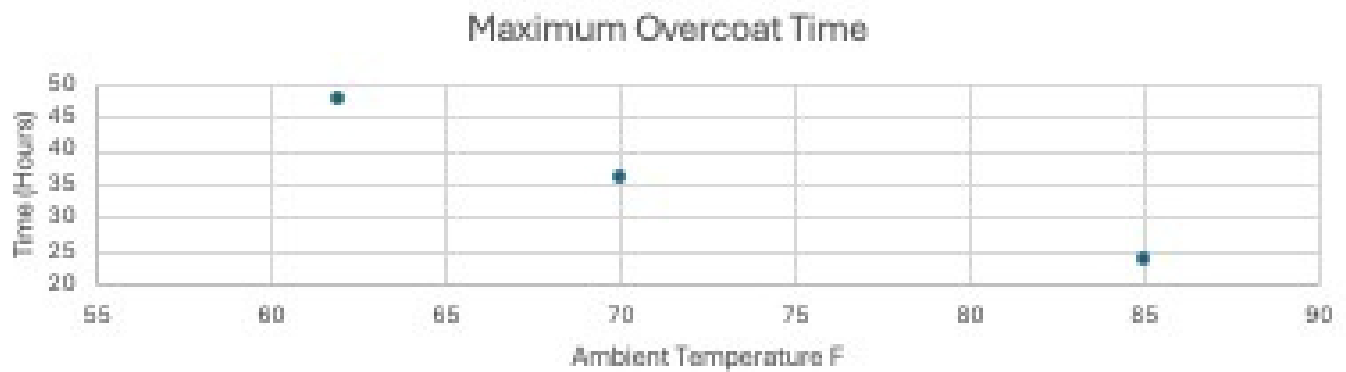
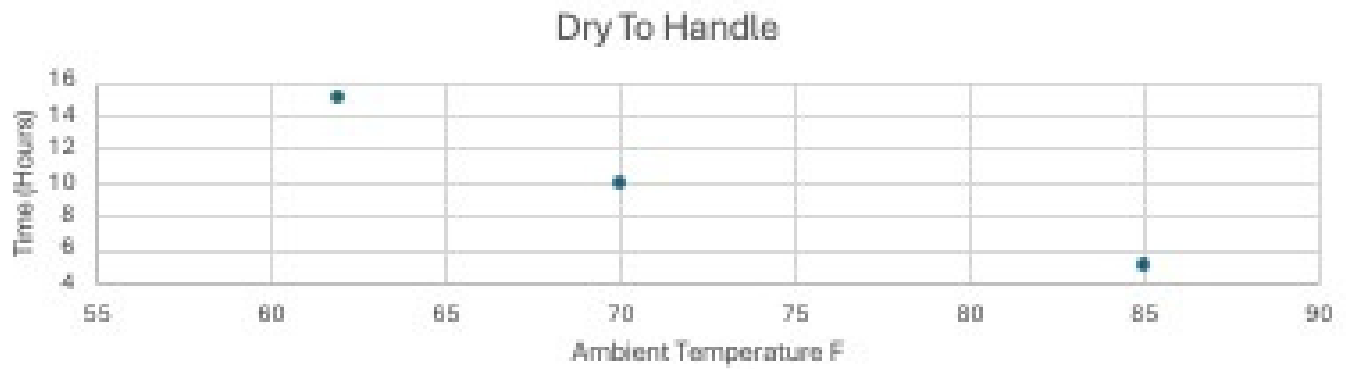
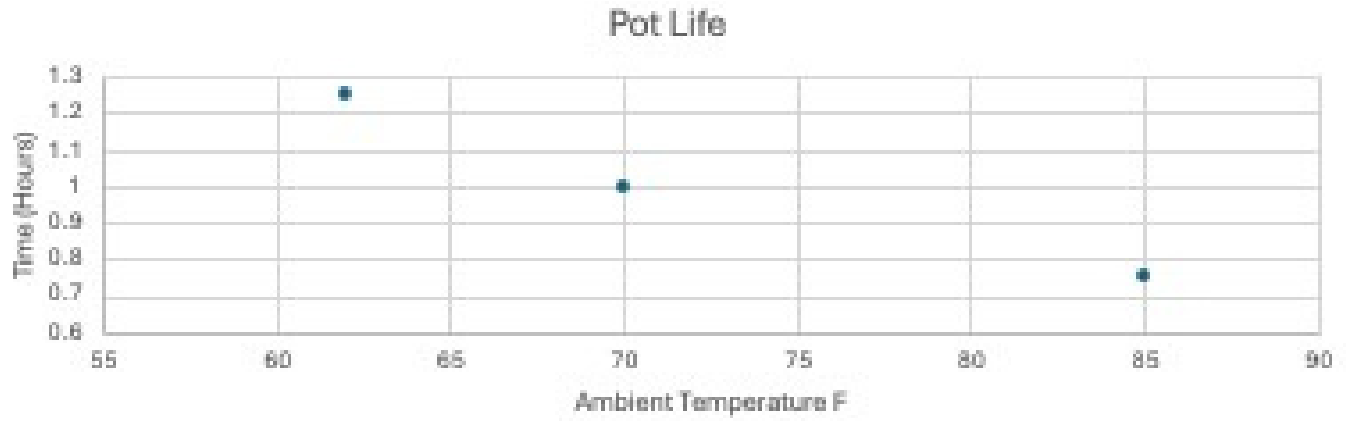
(d) EQUIPMENT REQUIREMENTS: jiffy or paddle type blade for mixing and low speed drill. Notched squeegee, notched trowel, brush or roller for application

(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 a 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 1-3 mil profile before applying next step

GRAPHS FOR POT LIFE AND CURE TIMES:



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ADDITIONAL DATA/INSTRUCTIONS:

I. GENERIC TYPE AND DESCRIPTION: 100% solids, low odor, bio-renewable leveling agent that imparts a base color and waterproof properties designed to protect the substrate from corrosion

II. MANUFACTURERS DATA: [Click here to enter text](#)

III. PROPERTIES: [Click here to enter text](#)

IV. SURFACE PREPARATION MINIMUM REQUIREMENTS: 1 mil. minimum Surface profile. Surface must be clean, dry and free from flaking particulate

V. MIXING PROCEDURES: mix part A resin with part C aggregate slowly with jiffy or paddle blade for 1 minute to mix in aggregate evenly. Add part B hardener and continue to mix on low speed for an additional 1 minute (until homogeneous)

VI. APPLICATION: apply by notched trowel or squeegee, brush or roller. Min. of 4 mils is recommended for best results