

BIO-DUR® 565

REINFORCED CHEMICAL
RESISTANT EPOXY
COATING



Thin Film Technology, Inc.

PRODUCT DATA SHEET

BIO-DUR® 565 is based on a unique blend of epoxy polymer and aliphatic polyamine curing agents formulated for extreme chemical resistance with an unusual degree of surface tolerance. The formulation is solvent-free to ensure safety and maximum technical performance. Kevlar®* microfibers are incorporated for reinforcement and viscosity management to achieve high application rates.

The formulation is uniquely field-friendly, non-hazmat and supplied in the most preferred 1/1 by volume mixing ratio.

BIO-DUR® 565 provides permanent protection under the most adverse conditions. The formula is uniquely field-friendly and uses advanced low toxicity ingredients in a high build brushable/rollable product. The sister product BIO-DUR® 566 is available if a higher viscosity, "light paste" consistency is required. All colors including White are available and can be shipped "Non-Regulated" by USDOT, IATA and IMO.

** Kevlar is a trademark of E. I. Dupont de Nemours Co.*

RECOMMENDED USES

CHEMICAL RESISTANT COATING: In harsh chemical service such as piping, tank internals, clarifiers, wastewater treatment concrete and steel surfaces, brine tanks.

ANTICORROSIVE COATING: general service in aggressive exposures including high abrasion.

ENCAPSULATING COATING: Smooth, dense, easily decontaminated coating for steel and concrete.

TECHNICAL INFORMATION

VEHICLE TYPE	Epoxy/Aliphatic amines
PIGMENTATION	Color/Inert/fibrous reinforcement
COLORS	Standard White, Black, Gray – other available
FINISH	Slight texture
THINNER	Not normally required
CLEANER	MEK or lacquer thinner
MIXING RATIO	1.0/1.0 v/v
INDUCTION TIME	Not required
POT LIFE	Approx. 40° / 77°F
FLASH POINT	Over 200°F
SOLIDS BY VOLUME	100%
SPREADING RATE/GAL.....	1604 mil/sq.ft./gal, 53.5 sq.ft./gal @ 30 mils
DRY TIME, (Dust free)	4 hours at 77°F
DRY TIME, (Service).....	14 hrs. light, 72 hrs. heavy
APPLICATION METHOD.....	Brush, roller, heated plural airless spray
STORAGE CONDITIONS.....	Normal, Freezing OK
VOC.	Essentially zero

APPLICATION NOTES

SURFACE PREPARATION: Performance depends to a great extent upon the degree of surface preparation attained. For severe service such as in tank internals a white metal abrasive blast to NACE 1, SSPC-SP-5, SA3 standard is recommended. Although BIO-DUR 565 will perform well on compromised surfaces a minimum standard of "Near-White" blasting, NACE 2, SSPC-SP-10, SA2.5, is recommended. In certain circumstances BIO-DUR 565 may be applied even to wet surfaces with surprisingly good results.

MIXING PROCEDURE: BIO-DUR® 565 is supplied either in 2 gallon or 10 gallon kits of 2x1, or 2x5 gallon containers of epoxy base and curing agent. These components are formulated in contrasting colors to facilitate complete mixing. "Black" BIO-DUR® 560 for example is supplied with a jet black epoxy base and an off-white curing agent which mix together to yield a black mixture. Visible streaks of either black or white, if seen during the course of mixing, indicate "hotspots" of unmixed components. It is imperative to properly mix the components since unmixed "hotspots" of either base or curing agent *will never cure*.

Remove equal quantities of base and curing agent from their cans and place them in a clean plastic or steel container. Mixing is easily accomplished by stirring with a "Jiffy" type mixer in a geared down, (high torque), 1/2" electric drill. Once mixing begins, there will be approximately 40 minutes of working time available at 80°F. Keeping the components and mixture cool, rather than leaving it in a hot area may extend this time.

APPLICATION:

- 1) Using a stiff brush or roller apply from a tray of mixed material aiming for a coverage rate of about 50 sq.ft./ gallon.
- 2) Application by heated plural spray is easy and results in attractive, uniform films with exceptional resistance to sagging and great edge coverage using the following equipment setup:

Graco "King" or similar with heated hoses.
Fluid pressure: 2,500 psi
Mix ratio: 1/1 by volume
Filters: Remove all filters
Fluid temp: 140°F
Tip size: .031" -.039" orifice

Note: For productivity estimate an application rate of one gallon per minute through a 0.035" tip at 2,500 psi.

CURING BEFORE SERVICE: BIO-DUR® 565 will cure to a hard film within about 14 hours and is suitable for traffic after this time. Allow at least three (3) days at 77°F before subjecting to aggressive chemical service from industrial solvents and similar materials.

TYPICAL PHYSICAL PROPERTIES OF THE CURED FILM:

Compressive strength: 7,380 psi (50.9 N/mm²)
Tensile Strength: 6,000 psi (est.)
Flexural Strength: 4,550 psi (31.4 M/mm²)
Abrasion Resistance: 34.0 mg/1,000 cycles (CS17 wheels with 1,000 gram weights)

WE URGE YOU TO READ THE MATERIAL SAFETY DATA SHEET (MSDS) BEFORE USING PRODUCT AND TO CALL THIN FILM TECHNOLOGY, INC. AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION.



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SAFETY: This is a hazardous material if misused. Read and understand the Material Safety Data Sheet (MSDS) before use.

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