BIO-DUR® 560

REINFORCED EPOXY COATING FOR APPLICATION ABOVE OR BELOW WATER

PRODUCT DATA SHEET

BIO-DUR® 560 is based on a unique blend of liquid epoxy polymer and aliphatic polyamine curing agents, which is able to displace water from wet surfaces in order to make a permanent bond. 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-even underwater! **BIO-DUR 560** has successfully passed DBA test requirements for above or below water applied nuclear, Service Level 1 use.

BIO-DUR® 560 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® 561 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.

RECOMMENDED USES

ANTICORROSIVE COATING: Splash zone, abrasion resistance above or below water.
REPAIR COMPOUND: Patching, leak sealing etc. above and below water.
FAIRING COMPOUND: Smoothing rough steel and concrete.
ENCAPSULATING COATING: Smooth, dense, easily decontaminated coating for steel and concrete.
ASTEWATER: Reinforces, smooths and protects concrete exposed to chemical or municipal waste.

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 BELOW WATER: Remove marine biological settlement and corrosion by high pressure water jetting with or without abrasive. Conventional air/abrasive blasting works well at shallow depths however efficiency falls off sharply below, say, 10'. Hand held power tools such as needle guns or grinders can give good results if applied conscientiously in small areas but will be inadequate in large areas. Plan to apply the BIO-DUR®560 within 45 minutes maximum after surface preparation to minimize rerusting or initial settlement of fouling slime, which interferes with initial adhesion.

SURFACE PREPARATION ABOVE WATER: Application above water requires similar high pressure water blasting or dry abrasive blasting to yield a firm, granular surface free of loose contamination. Since there is no problem from resettlement of marine fouling when working above water it is possible to delay application of the BIO-DUR 560 indefinitely provided fresh contamination of the cleaned surface does not occur.

MIXING PROCEDURE: BIO-DUR® 560 is supplied either in 2 gallon or 4 gallon kits of 2xl, 2x2 or 2x5 gallon containers respectively each 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 seen during the course of mixing indicate "hotspots" 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 about 40 minutes of working time available at 80°F. This time may be extended by keeping the components and mixture cool, rather than leaving it in a hot area.

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 using the following equipment setup:

Graco "King" or similar with heated hoses.

Mix ratio:	1/1 by volume
Fluid pressure:	2,500 psi
Fluid temp:	140°F
Filters:	Remove all filters
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® 560 may be immersed in fresh or salt water immediately after application. It 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 POWERWRAP LP AS NECESSARY FOR ADVICE OR INFORMATION BEFORE ANY ACTUAL OR CONTEMPLATED APPLICATION. THIS PRODUCT IS MANUFACTURED IN THE USA BY THIN FILM TECHNOLOGY, INC.

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