BIO-DUR® 563SW

FOR APPLICATION ABOVE OR BELOW WATER

Thin Film Technology, Inc.

PRODUCT DATA SHEET

BIO-DUR® 563SW 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®* fibers are incorporated for reinforcement and viscosity management to achieve high application rates - even underwater!

BIO-DUR® 563SW 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. Viscosity and cure rate are optimized for cold weather use down to about 45°F air or water temperature. The sister product BIO-DUR® 560SW is available if a slower curing rate 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

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

WASTEWATER: Reinforces, smooths and protects concrete exposed to chemical or municipal waste

TECHNICAL INFORMATION

VEHICLE TYPE ……	Epoxy/Aliphatic amines/modifiers
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. 15’ / 77°F
FLASH POINT ……	Over 200°F
SOLIDS BY VOLUME ……	100%
SPREADING RATE/GAL……	53.5 sq.ft./gal @ 30 mils, 8 sq.ft./gal @ 200 mils
DRY TIME, (Dust free) …….	1.5 hours at 77°F
DRY TIME, (Service)……	8 hrs. light, 36 hrs. heavy
APPLICATION METHOD……..	Brush, roller
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 but efficiency falls off sharply below 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®563SW 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 563SW indefinitely provided fresh contamination of the surface does not occur.

MIXING PROCEDURE: BIO-DUR® 563SW is supplied either in 2, 4 or 10-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® 563SW 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" 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), ½" electric drill. Once mixing begins there will be about 15 minutes of working time available at 77°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 mixed components from a tray aiming for a coverage rate of about 50 sq.ft. per gallon to yield a film thickness of about 32 mils.
2) Contact TFT for recommendations if spray application is desired.
3) BIO-DUR 563SW can be applied from 45°F (7.2°C) to 120°F (48.9°C). At temperatures below 45°F, the curing reaction slows dramatically. At temperatures above 120°F, the lowered viscosity can result in sagging on vertical surfaces. Under these conditions, TFT recommends the HHA (High Heat Application) variant of BIO-DUR 560SW which can be applied up to about 220°F (104°C).

CURING BEFORE SERVICE: BIO-DUR® 563SW may be immersed in fresh or salt water immediately after application. BIO-DUR® 563SW is designed and intended for water service at temperatures up to about 120°F. If resistance to severe chemical or higher heat environments is required we recommend either standard BIO-DUR® 560 or BIO-DUR® 561.

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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