

# BIO-DUR® 561

REINFORCED EPOXY  
COATING FOR APPLICATION  
ABOVE OR BELOW WATER



Thin Film Technology, Inc.

## PRODUCT DATA SHEET

**BIO-DUR® 561** 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® 561** provides permanent protection under the most adverse conditions. When manufactured for Nuclear service it is qualified for Service Level 1 use with above or below water application. The formula is uniquely field-friendly and uses advanced low toxicity ingredients. 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.

**WASTEWATER:** Reinforcing, smoothing and protecting worn concrete damaged by exposure to chemical or municipal waste streams.

## 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.....	40 sq. ft./gal @ 40 mils rec. U/W application rate.
DRY TIME, (Dust free) .....	4 hours at 77°F
DRY TIME, (Service).....	14 hrs. light, 72 hrs. heavy
APPLICATION METHOD.....	Trowel, "Pool float", mitts
STORAGE CONDITIONS.....	Normal, Freezing OK
VOC. ....	Essentially zero

## APPLICATION NOTES

**SURFACE PREPARATION:** 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 about 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® within 45 minutes maximum after surface preparation to minimize rerusting or initial settlement of fouling slime, which interferes with initial adhesion.

Application above water requires similar high pressure water blasting or dry abrasive blasting to yield a firm, granular surface free of loose contamination.

**MIXING PROCEDURE:** BIO-DUR® 561 is supplied either in 2 gallon or 4 gallon kits of 2x1 or 2x2 gallon containers respectively each of epoxy base and curing agent. These components are formulated in contrasting colors to facilitate complete mixing. "Black" BIO-DUR® 561 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.

Remove equal quantities of base and curing agent from their cans and place them side-by-side on a surface of plastic, fiberboard etc. Mixing is easily accomplished by folding the components into each other using a spatula or piece of wood. 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, send the mixed material underwater as quickly as possible rather than leaving it on a hot deck.

### APPLICATION:

1) UNDERWATER Take the mixed BIO-DUR® 561 underwater in a can or bucket, it will free up a hand to have a hook on a belt to hold the can during painting especially if visibility is poor and a lantern has to be carried. Applicators such as broad putty knives or plastic straight-edged glue spreaders work well on most surfaces. Painters' mitts work well on small diameter tubular sections such as risers. BIO-DUR® 561 is resistant to the effects of wave application during curing and will be found to be easier to apply than traditional "splash-zone" compositions and much less messy than lower viscosity underwater "paints". BIO-DUR® 561 has a strong tendency to stick to underwater surfaces and expensive equipment should be protected using plastic suits or sacks to cover exposed surfaces.

2) ABOVE WATER: Apply using an appropriate tool such as a spreader or short, stiff brush if the surface is especially rough.

**CURING BEFORE SERVICE:** BIO-DUR® 561 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.

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.



Thin Film Technology, Inc. • PO Box 580669 • Houston TX 77258-0669  
(713) 910-6200 • Fax: (713) 910-6210 • Mobile (281) 802-0723  
Email: [jeff@thinfilmtech.net](mailto:jeff@thinfilmtech.net) • Website: [www.thinfilmtech.net](http://www.thinfilmtech.net)

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

WARRANTY DISCLAIMER: The technical data given herein has been compiled for your help and guidance and is based upon our experience and knowledge. However, as we have no control over the use to which this information is put, no warranty, express or implied, is intended or given. We assume no responsibility whatsoever for coverage, performance, or damages, including injuries resulting from use of this information or products recommended herein.