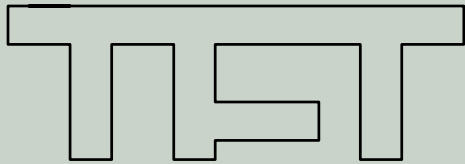


BIO-GARD™ 251

100% SOLIDS EPOXY
HEAVY DUTY PROTECTION



Thin Film Technology, Inc.

PRODUCT DATA SHEET

BIO-GARD™ 251 is based on pure liquid epoxy polymers and aliphatic amine curing agents. Pigmentation is selected for hardness and durability in order to obtain the best possible properties in the cured film.

BIO-GARD™ 251 is formulated with *no* volatile solvents and is so completely tolerant of water that it may be applied to damp or wet surfaces yet still function well as an anticorrosive barrier coating. Applications may be made using brush or roller with no special ventilation requirements - odor during application is almost completely absent. Airless spraying using heated, 2/1 plural equipment is easily accomplished at a fluid temperature of 130°F. The standard "00000" version may be shipped "Non-Regulated" by air or surface -this material is ideal for most applications however it will yellow on exposure to UV light.

BIO-GARD™ 251 has been successfully tested against ANSI N-101.2 and ASTM 3911, (340°F BWR curve), criteria for Radiation and DBA in nuclear applications. (Radiation dose rate was $2.2 \times 10_6$ rads/hour for a total of $1.1 \times 10_9$ rads @ 79°F).

RECOMMENDED USES

ANTICORROSIVE COATING: Abrasion resistance above or below water.

WASTEWATER: Reinforcing, smoothing and protecting worn concrete damaged by exposure to chemical or municipal waste streams. Especially useful as the final gloss coating over worn concrete, which has been rebuilt using other **TFT** repair products.

INDUSTRIAL: General-purpose chemical resistant lining for waste neutralization pits, secondary containment etc. When used with entrained or broadcast grit makes an excellent, chemical resistant floor and stair coating.

TECHNICAL INFORMATION

COMPOSITION: Vehicle Type..... Epoxy/Polyamines
Pigmentation.....Color/Inert
Solids by Volume.....100%
Flash PointOver 212°F
VOC..... Essentially Zero

APPEARANCE: Gloss Glossy smooth surface
Color..... Standard white, Haze Gray – all others available

APPLICATION: MethodsBrush, roller or heated 2/1 plural airless spray
Rec. Dry Film Thickness 8 - 16 mils, (200-400 microns)
Rec. Wet Film Thickness..... 8 - 16 mils, (200-400 microns)
Coverage, (thoer.)160 sq.ft./gallon @ 10 mils thickness
Induction Time Not Required - may be used immediately after mixing
Pot Life.....Approx. 40' @ 77°F, (25°C)
Dry Time – Dust Free5 hours @ 77°F, (25°C)
Dry Time - Service..... 12 hours handling, 24 light service@ 77°F, (25°C)

STORAGE: Shelf Life.....24 months under normal storage conditions

TRANSPORTATION:..... USDOT, IATA, & IMO "Non-Regulated"-(00000version)
..... UN2735, HAZ CLASS 8 PG III -(11111version)

APPLICATION NOTES

SURFACE PREPARATION: This may be accomplished in several different ways:

Bare Concrete: surfaces should be allowed to cure for a minimum of 20 days before coating. Weak surface laitance must be removed by either acid etching or, preferably, abrasive sweeping before coating. Aged, uncoated concrete surfaces are best prepared by abrasive sweeping. Unless carried out properly acid etching can give unpredictable results due to inadequate etching or inadequate rinsing, for this reason abrasive blasting is the preferred method of preparation. Contamination by oil or grease should be removed with an industrial degreaser before either abrasive blasting or acid etching.

Coated Concrete: with worn but generally sound coatings may be coated after a thorough and vigorous cleaning with aggressive cleaner. Make necessary repairs to the concrete surfaces with BIO-FILL™ before applying the BIO-GARD™ 251 coating. Note: BIO-GARD™ 251 will not soften existing coatings since it contains no solvents however the ultimate strength of the coating system will be determined by the strength and adhesion of the residues of existing coatings. If the integrity of the existing coatings is doubtful it should be removed by abrasive blasting or other mechanical means to ensure good results from the fresh BIO-GARD™ 251 application.

Metallic Substrates: are best prepared by abrasive blasting. Small areas may be cleaned using grinders or needle guns however these methods are not practical for large jobs or tight clearances.

MIXING PROCEDURE: BIO-GARD™ 251 is supplied in 2-gallon kits of comprising 1.33 gallons of epoxy base in a 2-gallon plastic pail with 0.67 gallons of curing agent packed in a one gallon steel can. A 1/2" "Jiffy" type mixer with a high torque motor is recommended for proper blending. Pour the curing agent into the base and mix for about 2 minutes taking care to stir in all base material from the edges and base of the plastic pail, *unmixed material will never harden*. No induction or "sweat-in" time is required and the mixed material may be used immediately.

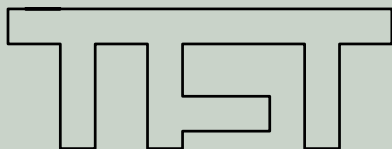
Pot life and reaction time is heavily dependent on temperature, as a general guide figure that each 18°F, (10°C), variation in temperature above or below 77°F, (25°C), will respectively halve or double the pot life and cure times.

APPLICATION: Brush or roller application is straightforward and requires no special technique. Application on a floor is assisted by using a squeegee to distribute the BIO-GARD™ 251 then back rolling to achieve an even coating. The material will thicken in cold weather and will be very heavy at temperatures of 50°F and below. It may be useful to employ a squeegee to quickly distribute the coating over vertical surfaces before finishing with a brush or roller. If permissible to use solvent it will be found that 5 -10% of lacquer thinner or MEK will greatly reduce viscosity in cold weather allowing much easier application.

CURING BEFORE SERVICE: BIO-GARD™ 251 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.

BG251/06APR98

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



Thin Film Technology, Inc. • P.O. Box 580669 • Houston, TX 77258-0669
(713) 910-6200 • Fax: (713) 910-6210 • Mobile: (281) 82-0723
Email: info@thinfilmttech.net • Website: www.thinfilmttech.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 of products recommended herein.