

BIO-GARD™

300

HEAVY-DUTY,
HIGH TEMPERATURE
EPOXY COATING



Thin Film Technology, Inc.

PRODUCT DATA SHEET

BIO-GARD™ 300 is based on liquid epoxy polymer and aliphatic polyamine curing agents designed for excellent surface tolerance. The formulation is high solids for maximum productivity and technical performance. This is a high performance multi-use coating which may be used as a DTM or in combination with other finishing coatings.

High temperature resistance is excellent and continuous service to 400°F is possible. Impact testing after exposure to 400°F+ shows retention of excellent toughness and adhesion to steel.

BIO-GARD™ 300 provides permanent protection under aggressive marine and industrial conditions. The formula is very field-friendly and uses advanced low toxicity ingredients. Standard color is Ivory with others available if necessary.

RECOMMENDED USES

ANTICORROSIVE COATING: Marine and Industrial "heavy duty" applications.

HIGH TEMPERATURE: Continues to protect up to 400°F

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

TECHNICAL INFORMATION

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| VEHICLE TYPE | Epoxy/Aliphatic amines |
| PIGMENTATION | Color/Inert |
| COLORS | Standard Ivory – other available |
| FINISH | Gloss |
| THINNER | Not normally required |
| CLEANER | MEK or lacquer thinner |
| MIXING RATIO | 2.00/1.00 v/v |
| INDUCTION TIME | Not required |
| POT LIFE | Approx. 4 hrs/ 77°F |
| FLASH POINT | 81°F |
| SOLIDS BY VOLUME | 90% |
| REQ. DRY FILM THICKNESS..... | 6 - 12mils, (240 - 120 sq. ft./gallon) |
| SPREADING RATE/GAL..... | 1444 mil/sq. ft./gal, 144 sq. ft./gal @ 10 mils dft |
| DRY TIME, (Dust free) | .5 hours at 77°F |
| DRY TIME, (Hard)..... | 24 hrs. |
| APPLICATION METHOD..... | Brush, Roller, airless spray |
| STORAGE CONDITIONS..... | Normal, Freezing OK |
| VOC. | 0.65 lbs/gal |

APPLICATION NOTES

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

New Concrete surfaces are best prepared by abrasive blasting to roughen and remove the weak surface laitance. When prepared properly the surface should have the firm granular appearance of "medium" sandpaper.

Aged Concrete surfaces may be prepared by either high pressure water jetting at sufficient pressure to remove all loose contamination and yielding a firm, "medium" sandpaper finish. Worn concrete in wastewater service may be prepared using only about 3,500psi however aged concrete which has never been in aggressive service may require jetting with over 8,000 psi to achieve the same result. Air abrasive blasting is also a satisfactory method of preparation. If the concrete is extremely worn it may be faired smooth before application of the BIO-GARD™ 300 using BIO-FILL™ 455 or BIO-FILL™ 456 depending on anticipated exposure - call TFT for recommendations.

Steel is best prepared by air abrasive blasting to a "near-white", (SA2.5, SSPC-SP-10) BIO-GARD 300 is, however, extremely tolerant of compromised surfaces and will provide excellent protection over tight rust or existing coating residues in sound condition.

MIXING PROCEDURE: BIO-GARD™ 300 is supplied in 3-gallon kits of base and curing agent. Two gallons of epoxy base are packed in a 5 gallon pail with one gallon of the curing agent is packed in a one gallon insert inside the pail. Use a ½" "Jiffy" type mixer to initially stir the base then pour in the curing agent and continue mixing for about one extra minute taking care to incorporate all material from the base and sides of the pail. If unmixed epoxy base or curing agent is applied to the surface **it will never cure.**

APPLICATION: Pour the mixed product into a pan and apply with a roller using typically a 3/8" nap for both steel and concrete. Especially rough surfaces will apply more easily using a ½" nap.

When making application by brush use an appropriate sized brush with preferably natural bristles. In some applications it will be useful to either cut an inch or two of bristles from the end or to wrap the base of the bristles close to the shank with duct tape in order to stiffen the brush.

If airless plural spraying the following conditions are recommended:

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| Ratio: | Base/Cure :: 2.00/1.00 (volume) |
| Fluid temperature: | 70°F – 130°F |
| Fluid pressure: | 3,000 psi |
| Tip: | 21 – 30 thou" |
| Cleaning solvent: | MEK or standard epoxy thinner |
| Hoses: | 3/8" x 150' max – (rec. 45:1 Graco King for 100'+ hose) |
| HP Filters: | 60 mesh |

CURING BEFORE SERVICE: Allow at least three (3) days curing at 77°F before subjecting to severe service.

IMPACT RESISTANCE: Passes 100Kg-cm impact with no detachment or cracking after 36hrs @ 425°F

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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