Technical Data Sheet & Application Guide

TL212AM ANTIFOUL Industrial Nano-Ceramic Slick Coat

This sheet covers product codes: TL212AM-F, TL212AM-G & TL212AM-M

- Non-Leaching, Antimicrobial nano-ceramic surface protection, hull coating fills in the surface porosity, creating a porous free surface to prevent biofilm build-up, inhibits both microfouling and macrofouling. To keep boats lighter and moving faster, increasing performance and durability. Use on float plane pontoons.
- Helps prevent bonding of scale, algae, mollusks, seaweed, dirt, debris, etc. from treated surfaces.
- Helps prevent hardwater mineral buildup and hull stains.
- TL212AM can be applied by spray, short nap-roller or pad-wiped.
- TL212AM is a high performance • single component • ambient air cured thin-film product
- Creates a covalent bond to the substrate making it a permanent part of the surface.
- Creates a hydrophobic surface to prevent water vapor pass-through.
- This Non-leaching HygieniCoat antimicrobial (AM) formulation that helps to protect treated surfaces from, and inhibit the growth of, microorganisms, molds and odor causing bacteria, preventing colonizing for extended periods of time or for as long as the coating remains on a treated surface.
- Nano ceramic super slick coating can be applied to the entire hull of boats and works equally well above and below the water line.
- If unsure of the complete removal of the previous coating **it is recommended to use TX520HT a clear ceramic high temperature primer** that can be used with the ANTIFOUL Application.
- ***If applying TL212AM to boat hulls - the customer "must" wait the full 5 days at 75°F or above before placing the coated surface below water. The complete cure will not occur under water.***

- Available by special order without the Antimicrobial HygieniCoat (AM) in gloss (TL212-G / TL212AM-G), matte (TL212-M / TL212AM-M) and flat (TL212-F / TL212AM-F) - specify your need at order time.

TL212AM Properties

- Color _____ Clear
- Viscosity _____ 16-18 sec. #2 Zahn
- Percent of Solids _____ 24
- Odor (liquid) _____ Slight Solvent
- Odor (cured) _____ None
- V.O.C. _____ Exempt per CFR 51.1 / regulation 8
- RoHS _____ Compliant
- REACH _____ Compliant
- Halogens _____ None
- Thermal Stability (cured) _____ 1200°F + (648.8°C)
- Conical Bond (⅛ inch mandrel) _____ Passed (ASTM D522-93a)*

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- Cross cut adhesion_____5B (ASTM D3359)*
- Coefficient of Friction _____0.03µ (ASTM D2047)
- Specific Gravity_____0.889 (ASTM D891-09)
- Pencil Hardness _____8h (ASTM D3363)*
- Average applied dry film thickness_____3 to 5 microns
- Estimated Coverage Rate(@ 3 microns)_____3,200 sq./ft. per gallon on hard surface, less if brick or concrete depending upon the porosity of the surface.
- Transfer to surrounding material_____Zero (0) transfer of contaminates.
- Dry to Touch (time @ambient)_____15 – 25 minutes** (average)
  (** a warm airflow and/or exposure to sunlight will reduce time required to reach "Dry to the Touch")
- Ambient cure (full properties) _____5 days/ambient*
  (* exposure to warmer conditions will help speed the cure process)
- *EPA Reg. No. 83019-1-98175

Application

- Can be applied in conjunction with our primer: TX520HT A high-quality Nano-Ceramic Adhesion Promoting Clear Primer (goes on 1-3 microns Dry Film Thickness/DFT)
- Creates an intrinsic bond to prepared surfaces, such as pure silicone & more that can be used with the TL212AM ANTIFOUL Coating to ensure adhesion especially when unsure of the complete removal of the previous materials. Allows for re-coating of nano-ceramic coatings without sanding or abrading the previous coat.
- Ensure you use PPE!
- For proper application of the TL212AM Nano-Ceramic coating material, the intended surfaces must be clean, dry, free from oils, dirt and any other contaminants that may be present.
- **It can be applied by spray, short nap-roller or pad-wiped.**
  - WARNING: BE SURE TO APPLY A VERY, VERY THIN COAT
  - **Hand wipe**: Apply with a dampened micro-fiber pad, or lint free cloth covered squeegee, in a somewhat linear motions, slightly overlaping over the previous area, "Wet-on-Wet" to cover all of the intended surface.
  - TL212AM is a thin film coating; to applied at approx. **5 to 12 microns** dry film thickness

- **Note! It is strongly suggested:** to do a small test area to be sure the application technique is understood, before starting on a large surfaces.
- Application method should be started at a corner or edge, until there is complete coverage. Ensure that once you start you don't stop until the job is completed, or you will leave a line in the finish. Nano Ceramic coatings form a covalent bond to the substrate and cannot be removed except with abrasion.

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Dry Times

TL212AM will be “Dry to the Touch, or dust & moisture free in approx. 25-30 minutes at ambient temperatures.

- Ambient cured properties are obtained in approximately 12-24 hrs after application at 28°C/79°F, higher temperatures cure the coating faster • though normally it will take at least 5 days to become totally crosslinked at ambient temperatures.
- If applying this to boat hulls - the customer "must" wait the full 5 days at 75°F or above before placing the coated surface below water.
- The complete cure will not occur under water.
- After 4+ hours - Rain on a vertical surface should not be an issue at 75°F or above (colder temps may require more cure time before exposing to rain).
- Horizontal surfaces may be negatively affected if there is standing water left on the surface prior to 24 hr partial cure. (temperature dependent / colder longer).
- The use of TX520 Nano-Ceramic adhesion promoting primer is suggested;
  - On surfaces that may be contanimated from silicone mold releases or similar surface contanimation.

Oven Cure Guidelines

Note: Ambient cured properties normally exceed those of oven cure.
TL181 can be oven cured, *but only after the applied coating has obtained a "dry to the touch"* surface. Using convection type-airflow for oven cure 350°F / 30 minutes (part temperature). Oven cured is referring to a commercial or industrial drier oven with fume extraction.

Warning - Not to be cured in a household oven that is also used for cooking food.