



TESLAN® 811

CNT Pit Filler

Product Description

TESLAN® 811 CNT Pit Filler is the next generation of pit fillers and fairing compounds. It is 100% solids, zero VOC, crystalline silica free, high strength two-component CNT epoxy pit filler and surfacing compound designed for steel and metallic substrates. This product incorporates carbon nanotubes (CNTs) to provide enhanced durability, adhesion, and integrity to non-load bearing pitted or gouged steel surfaces. TESLAN® 811 CNT Pit Filler is designed to be applied to properly prepared metallic surfaces and top coated with any of the TESLAN® primers or topcoats. Topcoats may be applied shortly after application or TESLAN® 811 CNT Pit Filler can be tooled, sanded, and coated the following day.

Recommended Uses

For use in atmospheric and immersion environments where corrosion pitting is evident or where a transition surface is required (i.e. tank wall and floor chine transition). Use directly on properly cleaned and prepared substrates. For optimal results, follow the application of the primer with TESLAN® Topcoat systems. Project applications include:

- Oil & Gas Platform Decks
- Oil & Gas Platform Skidpans
- Tanks
- Pipes & Flanges
- Pipe Support Structures
- Structural Members
- High Impact Areas
- Lay Down Areas
- Staging/Receiving Areas

Product Characteristics (mixed)

Finish:	Flat
Color:	Dark Gray
Volume Solids:	100%
Weight Solids:	100%
Mix Ratio:	1:1 <u>by Volume</u> (Parts A: Parts B)
Working/Pot Life:	20 mins @ 77°F(25°C)
NOTE: Use of material beyond its working pot life may result in sagging/placement issues	
VOC:	0 lbs/gal (0 g/l)
Sweat-in-Time:	Not Required
Reduction/Thinning:	Not Recommended

Application Guidelines

This product is designed for application directly to properly cleaned and/or blasted steel or metallic substrates. Preferred application method is by gun dispensing the material as detailed in the Mixing Procedures section and then to apply directly onto the surface using a trowel, spatula, or putty knife. For application over other metallic substrates or existing coatings in sound condition, contact Tesla NanoCoatings Sales Service for application recommendations.

Theoretical Coverage: 13 ft²/gal (.31 m²/l) at nominal 1/8" (125 mils/3175 micron) DFT.

Note: Theoretical Coverage rate is calculated on volume solids and does not include loss due to pit depth, surface profile, surface irregularities, or applicator skill and material loss during mixing and application.

Drying Schedule @ 50% RH and applied at nominal 1/8" (125 mils/3175 micron) DFT.

	@77°F(25°C)
To Touch:	2 hours
To Handle:	4 hours
To Tool/Sand:	5 hours
Rain Exposure:	1 hour
Minimum Recoat w/ Epoxy:	1 hour
Maximum Recoat w/ Epoxy:	24 hours
To cure:	1 Day

Drying and recoat times are temperature, humidity, and film thickness dependent. If maximum recoat time is exceeded, abrade surface in accordance with SSPC SP 7/NACE 4 or other TESLA approved method before topcoating. Remove any residues from abrading process ensuring a clean, dry and contaminate free surface is achieved before topcoating.

Application Guidelines (cont.)

Temperature (Air, Surface, Material) / Humidity Requirements

Minimum: 50°F(10°C), 10% RH Maximum: 122°F(50°C), 90%RH

If material temperature drops below minimum temperature, warm the material to 60F (15°C), in order to mix properly.

Surface Preparation

TESLAN® 811 CNT Pit Filler is designed for direct application to properly prepared substrates. All surfaces should be 5°F(3°C) above the dew point and clean, dry, and contaminate free.

Minimum Surface Preparation Requirements:

For Steel

SSPC SP10/NACE 2 Near-White Blast Cleaning

ISO8501-1: Sa 2.5

Surface Profile: 2-4 mil (50-100 micron)

(NOTE: Where blasting is not practical and conditions allow, prepare surface per SSPC SP11 Power Tool Cleaning to Bare Metal, achieving a minimum 2 mil (50 micron) profile.)

For application over other substrates or existing coatings in sound condition, contact Tesla NanoCoatings technical support for surface preparation recommendations.

Mixing Procedures

MIXING PROCEDURE:

TESLAN® 811 CNT Pit Filler is packaged in a double barrel cartridge set and is dispensed using the TESLAN® Manual Dispensing Gun.

Remove the cartridge retaining nut, compression disc, and end cap from cartridge nozzle. **DO NOT DISPOSE OF THESE PARTS.** Retract the piston rod breech and insert cartridge into manual dispensing gun housing and evenly trigger the gun until equal portions of A & B components are being dispensed. To use, dispense even ribbon portions onto a plastic artist palette (or equivalent nonporous surface) and mix them together using a putty knife in a folding and figure 8 motion. Continue blending the two components until a smooth consistency and uniform color is achieved. Apply to surfaces as outlined in the Product Application and Equipment Recommendation section of this PDS.

When sufficient material has been dispensed, depress the thumb release and retract the rod to free the push disk and remove the TESLAN® 811 cartridge set. Clean excess material from the cartridge nozzle and re-insert the end cap into the proper components, affix compression disc, and re-attach the retaining nut. The cartridge can now be stored for later re-use.

NOTE: Only mix enough TESLAN® 811 CNT Pit that can be placed within the workable pot life time of the material.

Product Application and Equipment Recommendations

TROWEL, PUTTY KNIFE, PLASTIC SPATULA APPLICATION

While holding the application tool at approximately 45-degree angle to the surface, apply firm pressure to force the material into the pitted surface in order to displace air in pits with the TESLAN® 811 CNT Pit Filler material. Using this method, evenly distribute the material into the pitted surface or areas. Use of a mortar hawk or tray is recommended to allow the applicator to remove excess material as well as to apply fresh TESLAN® 811 CNT Pit Filler material to and from the surface. The TESLAN® 811 CNT Pit Filler can be tooled to a feather edge and blended into adjacent areas for an even and level transition.

The above suggested parameters are for guidance only and settings may vary depending upon ambient conditions, actual equipment used, and project site specifics. Contact Tesla NanoCoatings Sales Service regarding the use or suitability of other proposed equipment.

Do not use material beyond its useful working pot life limits.

Do not mix freshly prepared material with previous catalyzed material, as the new material will assume the properties of the previously mixed material.

Do not reduce or thin TESLAN® 811 CNT Pit Filler

Cleanup

Immediately clean equipment with TESLAN® 0901 Epoxy Reducer, Toluene, or Xylene. For use of other thinners not listed, contact Tesla NanoCoatings Sales Service.

Safety/Storage/Disposal

Safety

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of Tesla NanoCoating's knowledge, the information contained herein is accurate on the date of publication and is subject to change without prior notice. The user is directed to review the most current SDS information found on the company website. Neither the Tesla NanoCoatings Company, or any of its subsidiaries assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Storage

Shelf Life (Parts A and B): 24 months, unopened (under recommended conditions). Store indoors at 40°F (5°C) to 100°F (38°C).

Disposal

Dispose of unused material following all laws and regulations.

Contact Information

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Disclaimer and Warranty

Tesla NanoCoatings' products are manufactured to the highest quality standards and practices; we offer these products with the express understanding that the user assumes all risk and liability in connection therewith. As the use of the product is beyond our control, Tesla NanoCoatings Inc. makes no warranties regarding the products and all other warranties, express or implied, including warranties of merchantability or fitness for specific, intended, or particular use or purpose, are explicitly disclaimed.

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