

TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT



Product Description

TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT is a solvent-based, two-component, CNT-epoxy-polyamide topcoat designed for application over TESLAN® 11XX ZN-CNT or 15XX AL-CNT primers (with or without TESLAN® 2100 LOW VOC EPOXY-CNT INTERMEDIATE).

Recommended Uses

Use directly over TESLAN® 11XX ZN-CNT LOW VOC EPOXY PRIMERS, TESLAN® 15XX AL-CNT PRIMER or TESLAN® 2100 LOW VOC EPOXY-CNT INTERMEDIATE.

Typical recommended application include:

- Drilling Rigs and Offshore Platforms
- Storage Tanks & Process Vessels
- Pipelines & Equipment

Product Characteristics (mixed)

Color:	Gray
Volume Solids:	58 ± 2% (unreduced) 55 ± 2% @ 5% reduction 53 ± 2% @ 10% reduction
Weight Solids:	73 ± 2% (unreduced)
Mix Ratio:	1:1 by Volume (Part A: Part B)
Wet Density:	11.0 lbs/gal (1.3 kg/l) (unreduced)
Dry Film Density:	13.9 lbs/gal (1.7 kg/l)
Pot Life:	2 hours @ 100°F/38°C 4 hours @ 77°F/25°C 6 hours @ 50°F/10°C
VOC:	1.6 lbs/gal (192 g/l) (unreduced) 1.6 lbs/gal (192 g/l) @ 5% reduction* 1.7 lbs/gal (204 g/l) @ 10% reduction*
Viscosity @77°F(25C):	69 Krebs Units (unreduced)
Sweat-in-Time:	15 minutes

*Use only TESLAN® 0901 TYPE II LOW VOC EPOXY REDUCER.

Application Guidelines

This product is designed for application directly to properly primed steel and other metal substrates using conventional air-spray, air-assisted airless, or airless spray equipment. Brush application is only recommended for small areas or for stripe coating.

Recommended Film Thicknesses (unreduced)

	<u>Minimum</u>	<u>Maximum</u>
Wet mils (microns) per coat	5.0 (125)	14.0 (350)
Dry mils (microns) per coat	3.0 (75)	8.0 (200)

Theoretical Coverage (@ 3.0 mils / 75 microns dft): 308 ft²/gal
(7.5 m²/l)

If reduced more than 5%, do not exceed 14.0 mils / 350 microns wet film thickness or 8.0 mils / 200 microns dry film thickness in a single coat.

Drying Schedule @ 12 mils wet (300 microns)

	<u>@50°F(10°C)**</u>	<u>@77°F(25C)**</u>	<u>@100F(38C)**</u>
To Touch:	12 hours	3 hours	2 hours
To Handle:	72 hours	24 hours	8 hours
To Full Cure:	10 days	7 days	7 days

To Recoat w/ TESLAN® Epoxy System:

Minimum:	20 hours	4 hours	3 hours
Maximum:	6 months	6 months	6 months

To Recoat w/ TESLAN® Urethane or Polyaspartic-Hybrid System:

Minimum:	48 hours	24 hours	16 hours
Maximum:	6 months	6 months	6 months

**At 50% Relative Humidity (RH)

Drying time is temperature, humidity, and film thickness dependent. If maximum recoat time is exceeded, abrade surface in accordance with SSPC SP 7 (NACE No. 4) or other Tesla NanoCoatings approved method before recoating. Remove any residues from abrading process.

Temperature (Air, Surface, Material) / Humidity Requirements

Minimum: 50°F (10°C), 40% RH Maximum: 100°F (38°C), 90% RH

The surface should be dry and at least 5°F (3°C) above the dew point.

Surface Preparation

For new or bare abrasive blasted metal surfaces: Prepare substrate and apply TESLAN® 11XX ZN-CNT LOW VOC EPOXY PRIMER or TESLAN® 15XX AL-CNT LOW VOC PRIMER. Apply a coat of TESLAN® 21XX Low VOC EPOXY-CNT INTERMEDIATE for additional protection in severe offshore or coastal environments. Carefully follow all recommended surface preparation, application guidelines, and recoat schedules for the primer or intermediate coat. Surface must be clean, dry and in sound condition prior to applying TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT.

For application over an existing coating other than those listed above: Contact Tesla NanoCoatings Technical Service for recommendation.

Mixing Procedures & Thinning Recommendations

DO NOT MIX PARTIAL KITS. Use an air-driven power mixer and keep material under agitation (as needed), to prevent settling or separation while applying this product. Slowly mix 1-part Component A with 1-part Component B by volume. Adjust mixer speed as needed, to thoroughly blend the two components. Strain through a 35 to 60 mesh (310 to 681 microns) screen prior to use. For extended spray application sessions, keep under low RPM agitation to prevent settling. For brush and roller application, stir occasionally to prevent settling.

Do not use mixed material beyond pot life limits.

Do not mix previous catalyzed material with freshly prepared material.

If needed, thin material up to 10% by volume using only TESLAN® 0901 TYPE II LOW VOC EPOXY REDUCER.

Product Application & Equipment Recommendations

For optimum protection, stripe coat all crevices, welds, and sharp angles by brush application. Use a medium bristle brush and avoid re-brushing.

Airless Spray

Pressure: 1500-2400 psi (103-166 bar)
 Hose: 1/4 or 3/8 inches (6.4 or 9.5 mm)
 Tip: 0.009-0.015 inches (225-375 microns)
 Filter: 60 mesh (250 microns)
 Reduction: As needed up to 10% by volume
 Equipment: Graco or similar

Conventional Air-Spray

Pressure: 40-50 psi (2.8-3.4 bar)
 Hose: 3/8 inches (9.5 mm)
 Tip: E
 Filter: 60 mesh (250 microns)
 Reduction: As needed up to 10% by volume
 Equipment: Graco or similar

Cleanup

Immediately clean and flush all equipment with TESLAN® Epoxy Reducers or other solvents compatible with solvent based epoxy coatings (MEK, xylene, etc.)

Recommended Primer Systems

TESLAN® 11XX ZN-CNT LOW VOC EPOXY PRIMER
 --or--
 TESLAN® 15XX AL-CNT LOW VOC EPOXY PRIMER

Recommended Intermediate Systems (Optional)

TESLAN® 21XX EPOXY-CNT LOW VOC INTERMEDIATE

Recommended Thinners/Reducers

TESLAN® 0901 TYPE II LOW VOC EPOXY REDUCER
 [VOC content: 2.4 lbs/gal (288 g/l)]

Safety/Storage/Disposal

Refer to Safety Data Sheets (SDS) before use.

Shelf Life (Part A and B): 24 months, unopened (when stored under recommended conditions). Store in dry, shaded conditions at 40°F (5°C) to 100°F (38°C).

Dispose of unused material following all laws and regulations.