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TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT

Product Description

TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT is a NORSOK M501 tested solvent-based, two-component, epoxy topcoat designed for the protection of steel and metallic substrates in harsh environments per ISO 12944-9 including CX, IM4, tidal & splash zones. TESLAN® 3100 Low VOC Epoxy-CNT Topcoat can be applied directly utilizing patent pending 2 x 1 WET EDGE process. Use only in conjunction with recommended TESLAN® Primer systems.

Recommended Uses

Use directly over TESLAN® Primers or as recommended by Tesla NanoCoatings, Inc.
Typical recommended application include:

- Storage Tanks & Process Vessels
- Pipelines & Equipment
- Offshore Platforms and Related Structures
- Ships and Barges
- Locks, Dams and Buoys
- Marine Thrusters
- Bridges and Transportation Infrastructure
- Pipelines/Buried Steel
- Tank Interiors/Exteriors
- Trucks and Trailers
- Structural Steel
- Pilings
- Steel Decking

Product Characteristics (mixed)

Finish:	Semi-Gloss
Color:	Gray
Volume Solids:	58 ± 2% (unreduced)
Weight Solids:	73 ± 2% (unreduced)
Mix Ratio:	1:1 by Volume (Part A: Part B)
Pot Life:	2 hours @ 100ºF/38ºC 4 hours @ 77ºF/25ºC 6 hours @ 50ºF/10ºC
VOC:	2.0 lbs/gal (238 g/l) (unreduced) 2.2 lbs/gal (262 g/l) @ 5% reduction* 2.5 lbs/gal (298 g/l) @10% reduction*
Viscosity @77ºF(25C):	70 Krebs Units (unreduced)
Sweat-in-Time:	Not required

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

Application Guidelines

This product is designed for application directly to properly primed substrates. Brush and roller application is recommended for areas where spray application is not feasible. For application over other metallic substrates or existing coatings in sound condition, contact Tesla NanoCoating's Sales Service for application recommendations.

Recommended Film Thicknesses (unreduced)

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

Theoretical Coverage (@ 1.0 mils / 25 microns dft): 930 ft^2/gal (23 m^2/l)

Dry Film Thickness requirements will vary with surface conditions, environmental exposure, and application method. Contact Tesla NanoCoating's Sales Service for application recommendations.

Drying Schedule @ 50% RH and 10 mils wet (250 microns)

	@50ºF(10ºC)	@77ºF(25ºC)	@100ºF(38ºC)
To Touch:	8 hrs	4 hrs	2 hrs
To Handle:	24 hrs	10 hrs	4 hrs
To Recoat w/ Epoxy:			
minimum:	1 hrs	0.5 hrs	0.5 hrs
maximum:	6 months	6 months	6 months
To Recoat w/ Urethane			
minimum:	24 hrs	16 hrs	16 hrs
maximum:	6 months	6 months	6 months
To cure:	10 days	7 days	7 days

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

Temperature (Air, Surface, Material) / Humidity Requirements

Minimum: 50ºF (10ºC), 40% RH Maximum: 122ºF (50ºC), 90% RH

The surface should be dry and at least 5ºF (3ºC) above the dew point.

Application Guidelines (cont.)

Maximum Continuous Operating Temperatures

Dry Conditions: 248ºF (120ºC)
Humid /Immersion 194ºF (90ºC)

Surface Preparation

For new or bare abrasive blasted metal surfaces: Prepare substrate and apply TESLAN® PRIMER. Carefully follow all recommended surface preparation, application guidelines, and recoat schedules for the primer or intermediate coat. Surface must be clean, dry and contaminate free prior to applying TESLAN® 3100 LOW VOC EPOXY-CNT TOPCOAT.

2x1 Wet Edge System is a wet on wet application. When TESLAN® PRIMER is applied and a flash off period of 30 mins – 1 hour is achieved, the primer can be topcoated with 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. Mix component A and component B individually until a smooth uniform consistency is achieved using a powered agitator and clean jiffy blade type agitator. Slowly mix component B into component A while component A is under agitation. Adjust mixing speed as needed to thoroughly blend the two components until a smooth and uniform consistency is achieved. Component A is a highly thixotropic material which will become more fluid upon the addition of component B and agitation. If needed, the material may be strained through a 35 to 60 mesh (310 to 681) micron screen before using. If material will be left in the container for extended periods of time, occasional agitation may be needed to prevent settling. While typically not needed, if environmental conditions necessitate the need to add thinner, TESLAN® 3100 may be thinned (after mixing A & B components) up to 10% with TESLAN® 0901 Epoxy thinner ONLY.

For brush or roller application, stir occasionally, to prevent settling.

Do not use material beyond its useful 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.

If needed, thin material up to 10% by volume using only TESLAN® 0901 Type II Low VOC Epoxy Reducer.

Product Application & Equipment Recommendations

Airless Spray

Pressure:	3100-5000 psi (207-345 bar)
Hose:	1/4 - 1/2 inches (6.4 - 13 mm)
Tip:	0.015-0.017 inches (381-431 microns)
Filter:	Not Required
Reduction:	As needed up to 10% by volume

Conventional Air-Spray

Air Pressure:	40-50 psi (2.8-3.4 bar)
Material Pressure:	30-40 psi (2.1-2.8 bar)
Hose:	Minimum 3/8 inches (9.5 mm)
Tip Orifice:	0.070 inches (1.8 mm)
Air Cap:	Pressure Feed High Atomization Combination
Filter:	Not Required
Reduction:	As needed up to 10% by volume

Brush and Roller For areas where spray application is not feasible use of a natural bristle brush or a woven nap roller may be used. Contact Tesla NanoCoatings Sales Service for proper roller cover nap recommendations to optimize your specific project's finished appearance.

The above recommendations 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.

Cleanup

Immediately clean and flush equipment with TESLAN® 0901 Epoxy Reducer or Tert Butyl Acetate. 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 our 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. However, neither the Tesla NanoCoatings Company or any of its subsidiaries assume any liability whatsoever for the accuracy of 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 40ºF (5ºC) to 100ºF (38ºC).

Disposal

Dispose of unused material following all laws and regulations.

Contact Information

For technical assistance:

Email: technicalsupport@teslanano.com
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For sales assistance:

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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.

Tesla NanoCoatings shall have no liability in contract or tort for any product liability concerning the products or for the omission of any warranty therefrom. Tesla NanoCoatings shall not be responsible for nor have liability for indirect, consequential, or incidental damages of any kind including, but not limited to, personal injury, property damage, loss of profits, loss of service, loss of business or service, business interruption or downtime, application or installation costs, liquidated damages, or other economic injury related to any defect in the products, use of the products, or breach by Tesla NanoCoatings, known or otherwise.