



SilOxi-101

Clear Alkoxysilane CSD coating

A clear Silane thin-film coating for Chemical Solution Deposition (CSD) providing an integrated oxidation-corrosion- and wear-resistance for all oxidizing metals, resulting in a higher grade material.

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- Provides an infused glass-like shield against oxidation, wear, staining and corrosive matter
- Chemically bonded with hydrophobic properties and No risk of delamination
- Ultra-Thin coating allowing protection on threads and other delicate components
- Optimized surface energy provides repelling, non-stick properties
- Unique material enhancing **utilizing environmentally neutral chemistry**
- Easy application. Room temperature cured. Ready to use solution

Product Description

SilOxi-101 was developed as a surface modifier for oxidizing metals used in harsh environments, such as marine, automotive, industrial and process industry applications. The low viscosity liquid reaches all cavities and voids in the substrate and forms an inert, ultra-thin, glass-like shield, which provides a more corrosion and wear resistant substrate together with new repelling properties. The chemical reactivity allows **SilOxi-101** to densify, impregnate and seal porous metals or oxidized/corroded substrates. These properties impair the absorption of moisture, salts, chlorides and other corrosive matter. The organo modified nano-ceramic formula becomes one with the substrate resulting in a higher grade, longer lasting material.

- Completely UV-Stable
- High Chemical resistance
- High hardness (up to H8)
- Repelling surface functions
- Low friction
- High Flexibility (10mm Mandrel)

SilOxi-101 is a one-component, inorganic/organic silane formula. Compared to traditional temporary metal passivation-systems, based on oils and waxes containing solvents as carriers, SilOxi-101 interacts with the substrates reactive elements and forms chemical bonds, creating an inert, integrated shield. The multi-reactivity of SilOxi works with the free ions on/in the substrate as well as the moisture from the air captured on the surface. The fully cured shield which SilOxi provides is also driven by its unique built-in catalyst that allows curing at room temperature. SilOxi-101 does not contain harsh solvents, heavy metals or toxins resulting in negligible VOC emissions.

Product Information

Color	Clear, slightly yellow
Finish/Sheen	Clear/High gloss
Components	1
Active solids	96 ±2.0
Flash Point	81°F/27.2°C (Pensky-Martens Closed Cup)
Unit Size	55ml, 285ml, 25liter

Application / Drying / Overcoat Information

Method of Application	Wipe, dip, brush, roller or spray
Number of coats	1
Dry Film Thickness	Subject to substrate Absorption; typical surface DFT 500 - 1500nm (0.5 – 1.5 micron)
Application Temp	50-95°F (avoid direct sunlight)
Dry Time	To touch: 30 minutes Hard: 1.5 hours Fully reacted: 24 hours
Thinner	DO NOT THIN
Cleaning	Ethyl, methyl alcohol, Isopropanol or denatured alcohol



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Surface Preparation

The substrate should be properly cleaned prior to treatment. Any dirt, oil, dust or other contaminants may disturb the reaction and the bonding to the substrate. Possible tensides and cleaning agents should be rinsed off well with clean water. Allow the object to dry completely prior to coating. Sand blasting is not required as **SilOxi 101** does not need a mechanical profile to bond to like traditional coatings. **NOTE: Sand blasting or chemical pretreatments may be necessary to prepare the substrate esthetically or mechanically.** Make sure the object to be treated is completely dry. Do not allow water to come in contact with SilOxi 101 before it is dry/hard to handle (approximately 1 to 2 hours). Avoid shortcuts. Inadequate performance will follow inadequate surface preparation.

Application / Systems and Use

Recommended temperature for treatment with SilOxi 101 is 70-85°F (20-30°C). Forced heat-curing may be introduced after the coating is hard to touch (1 – 2 hours) by gradually heating the coated object to 100°C (212°F) for 30 minutes. Note: make sure the object itself can handle higher temperatures.

SilOxi 101 may be applied by dipping, wipe-on, brush, roller or spray. Normally, a thin and even wet film should be left on the surface to be partially absorbed into the surface of the substrate – on vertical surfaces; the substrate will hold just the amount it can take. If the object is dipped in the solution, allow it to stay submerged for at least 20 seconds. When the object is slowly removed from the solution, allow the excess liquid to drip off and wipe away any puddles as SilOxi only cures solid when applied in a thin layer.

Normal coverage is expected to be 10ml per sq. meter. The coverage will depend mostly on the tool and method of application as well as substrate profile and porosity.

CAUTION: SilOxi reacts and cures to a solid material when exposed to air and moisture. Do not apply SilOxi in direct sunlight. Direct sunlight or high temperature should be avoided until the surface is dry to touch; otherwise SilOxi could react too quickly, which will impair its performance. Do not apply SilOxi in rain, heavy fog or in dew, as this will also adversely affect the performance of the product. When not in use, keep the container with SilOxi sealed tight so not to expose it to air and moisture. Store in room temperature or slightly below.

Transportation, Storage and Safety Information

Packaging and storage

- Keep containers tightly closed in a cool, dark and well-ventilated place.
- Keep tightly sealed in original packing.
- Flammable liquids – handle with care. UN 1993.

Safety and handling

Before using, please read the Safety Data Sheet (SDS), thoroughly for safety and toxicological data as well as for information on proper transportation, storage and use.

Limited warranty information – Please read carefully

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