



SGIST 1701

Passivation System for Corrosion Protection

Silane passivation system providing higher oxidation and better wear resistance for carbon steel, stainless steel, aluminum and galvanized surfaces

TECHNICAL DATASHEET 9702 04/15

- Designed to penetrate and passivate “hard-to-reach” rivets, threads, drilled holes, etc.
- Nearly invisible (200-500nm thick) chemical bond with surface with no risk of delamination
- Prevents surface oxidation through integrated protection
- Tighter surface matrix helps provide repelling properties
- Protection for several years *utilizing environmentally neutral chemistry*
- Easy application

Product Description

SGIST 1701 is designed as a surface modifier for carbon steel / stainless steel / aluminum / galvanized surfaces in light industrial, corrosive environments. The ultra-thin (100-200nm), inert shield provides a scratch and wear resistant surface together with repelling properties. These properties impair the absorption of moisture, salts and chlorides. Additionally the passivation provides an extended shield against galvanic corrosion and electrolysis.

- UV-Stable
- Chemical resistant
- Repelling surface tension
- Low friction

SGIST 1701 is an alcohol based, one-component, inorganic/organic silane formula. Compared to traditional aluminum passivation-systems based on oils and waxes containing solvents as carriers, SGIST 1701 has 100% reactive materials that form a semi-permanent chemical bond to the surface.

All this is accomplished with the environment and environmental pressures in mind. SGIST 1701 has been designed to be environmental neutrally - no heavy metals, toxins nor harsh solvent are used in the manufacturing of SGIST 1701 that *results in negligible VOC emissions for our customers.*

Product Information

Color	Clear, colorless
Finish/Sheen	Semi-gloss
Components	1
Volume Solids	98.5%
VOC	2-4 g/L
Flash Point	77.9°F / 25.5°C (Pensky-Martens Closed Cup)
Unit Size	300 ml, 600 ml, 1,200 ml, 25kg jugs and 55 gal drums

Application / Drying / Overcoat Information

Method of Application	Wipe, dip, brush, roller or airless spray
Number of coats	1
Dry Film Thickness	Subject to substrate absorption; typical 200-500 nm (0.2-0.5 micron)
Application Temp	50-95°F (avoid direct sunlight)
Theoretical coverage	9 fl. oz. per 500 SQFT
Dry Time	To touch: 25 minutes Hard: 1.5 hours Fully reacted: 48 hours
Thinner Cleaning	DO NOT THIN Ethyl, methyl alcohol, Isopropanol or denatured alcohol



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Surface Preparation

On new surfaces (untreated), the surface should be cleaned prior to treatment with ethyl (denatured) / methyl alcohol or isopropanol to remove all oily substances. Sand blasting or chemical treatment (etching) is not required. **NOTE: If sand blasted, use SGIST 1705 that is specifically designed for sand blasted surfaces.** Make sure the surface to be treated is completely dry. Do not allow water to come in contact with SGIST 1701 before it is dry/hard to handle (approximately 1 to 2 hours). Coating performance is always proportional to the degree of surface preparation. Avoid shortcuts. Inadequate performance will follow inadequate surface preparation.

Application / Systems and Use

Recommended temperature to apply SGIST 1701 is 70-85°F (20-30°C). For best results, use SGIST recommended application tools.

SGIST 1701 may be applied by wipe, brush, roller or airless spray. A thin and even wet film should be left on the surface to be absorbed into the surface of the material – the material will hold just the amount it can take. On small surfaces, around trimmings and hard to reach areas, the SGIST supplied microfiber cloth is the preferred method of application. **HINT: Dip the cloth so that it is soaked but not dripping.** Wipe the surface with soft pressure in an even and systematic pattern leaving a thin, even wet film on the surface – just enough so it does not run off. **NOTE: Overlap application wet-on-wet.**

On larger surfaces, use the SGIST applicator pad with handle. With the handle mounted, dip the applicator pad into the product (using a alcohol resistant paint tray – plastic - as a container). **HINT: Hold it vertically over the tray so the excess fluid runs off.** Swipe the pad with soft pressure in an even and systematic pattern leaving a thin, even wet film on the surface – just enough so it does not run off. Apply in sections from the top – down. **NOTE: Overlap application wet-on-wet.**

Dip-application is preferred on smaller components such as rivets, nuts and bolts. Using a plastic strainer (resistant to alcohol), dip cleaned components in SGIST 1701 solution (use appropriate alcohol resistant container). Shake off excess liquid. Carefully remove droplets or “curtains” with a cloth. Place separated components in a dry environment to cure.

Brush application: use a high quality natural bristle brush. **Roll application:** use a high quality, low nap, and solvent resistant roller. Apply uniform and sufficient. A slow, well loaded roll helps to avoid the creation of air-bubbles. **Spray application:** airless spray with 0.015-0.017 tip is recommended. Air spray with moisture and oil trap and a 0.070” fluid orifice.

CAUTION: Do not apply SGIST 1701 in direct sunlight. Direct sunlight or high temperature should be avoided until the surface is dry to touch; otherwise SGIST 1701 could react too quickly, which will impair its performance. Do not apply SGIST 1701 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 SGIST 1701 sealed tight so not to expose it to air and moisture.

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 packaging.
- Flammable liquids – handle with care.

Safety and handling

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

Limited warranty information – Please read carefully

The information contained herein is based on SG Industrial Surface Treatment’s (SGIST) present knowledge and experience, it is believed to be accurate and is offered in good faith. However, because conditions and methods of use of our products are beyond our control this information should not be used in substitution for customer’s tests to ensure that our products are safe, effective and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. SGIST’s sole warranty is that our products will meet the sales specification in effect at the time of shipment.

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