

# sti<sup>®</sup> Seamless Technologies, Inc.

## SeamTek<sup>®</sup> Type 1 N<sup>2</sup> UV Cured Flooring

### Product Data Sheet

#### 1. Product Description

##### Basic use

SeamTek<sup>®</sup> Type 1 N<sup>2</sup> flooring is composed of polyester and vinyl ester resins that are styrene free. These resins are formulated with no-VOC and no-HAP and as such are LEED compliant. Because of the nature of seal coat activation system the performance properties of the resin are enhanced by the UV cure.

SeamTek Type 1 flooring has been specifically designed to cure within seconds at such an advanced level so as to allow you to use of the flooring for chemical exposure and weight loads as soon as it is cured with no waiting. The system has excellent thermal properties and impact resistance.

Type 1 is a composite system reinforced with a fiberglass mat to enhance tensile strength and flexural strength. It can be built in several compositions to optimize the performance. The activator utilized in the seal coat resin (1033) is added and pre mixed in controlled conditions at the factory and does not require field proportioning to achieve maximum performance. Since the activator is a monomer, the guess work related to the accurate addition and mixing of final product has been removed. The predictability of the seal coat performance is greatly enhanced by these unique traits.

The vinyl ester body coat resin (4101) has excellent thermal stability on its own but when combined with the special design fillers exhibits thermal stability well in excess of 350 degrees. Type 1 can withstand temperatures experienced in Cage Wash Areas without fear of thermal shock. Type 1 is one of the LTS series referred to in our other series literature for high temperature resistance.

Type 1 can be installed over a sloping slab or a sloping mortar to enhance the flow of water to the drain(s). Sloping is recommended in all wet areas since flooring that is immersed under constantly ponding water and chemicals tends to deteriorate faster than flooring under alternate use conditions. Unless otherwise specified, Type 1 will follow the contour(s) of the existing substrate and can not be used as a stand alone system to correct such problems.

As with any flooring system, environmental conditions surrounding the installation are important. Ambient temperatures need to be between 65 and 80 F degrees with

slab temperatures at or above 60 degrees F; humidity must be below 70%. These conditions can be tough to achieve in certain new construction scenario but if they are not achieved the installation may suffer aesthetically and the resins may not performed as designed. Consequently STI can not be responsible for the performance of the flooring system installed under adverse conditions.

Type 1 has been designed to be resin rich so as to present a dense system that will experience minimal damage from surface chips that break the sealed surface. Consequently it is sensitive to moisture migration through the substrate to the underside of the floor. Concrete substrates should be checked for moisture migration using ASTM F 1869-98 calcium chloride test. If the test results are 3 pounds and over we recommend moisture remediation.

##### *Features and benefits include:*

- Clear and no ambering
- No HAP
- No VOC
- LEED Compliant
- 100% solids – solvent free
- Excellent Bond Strength
- Excellent Chemical Resistance
- High Taber Resistance

The STI SeamTek systems in general are composed of resins and aggregates which utilize the best available technology for safety , performance and lowest environmental impact. All products and systems are extensively field tested prior to use on SeamTek projects.

##### **Limitations**

SeamTek N<sup>2</sup> flooring must not be used to bridge moving cracks or joints. Non-moving cracks or joints that must be over coated require rigid repairs. N<sup>2</sup> flooring is not subject to discoloration from UV light therefore. Surface or air temperature must be between 65°F minimum and 80°F maximum and relative humidity below 75%. Lower temperatures will extend cure time and higher temperatures will reduce pot and work life. Chemical resistance as depicted in the specification is a relative classification and we recommend testing the chemicals you use in your facility on test flooring samples before making your final selection.

### Storage and Handling

Because SeamTek N2 is No VOC and No HAP, transportation and storage have fewer DOT restrictions.

### Product Health and Safety Information

Refer to container labels and Material Safety Data Sheets available from STI for health, safety and environmental information. If necessary, call STI at (800) 666-6216.

### Applicable Standards

STI SeamTek resins have been tested in accordance with American Society for Testing and Materials (ASTM) methods. The USDA and FDA no longer regulate coatings used on floors, walls, and ceilings in food process areas, since the surfaces are not intended for food contact.

### Mixing

Caution, activators or catalysts used in the cure of N<sup>2</sup> resins can cause chemical burns if not washed from the skin as soon as contact is made. The use of proper PPE is required when mixing catalysts.

Measure the N<sup>2</sup> resin into plastic marked containers. Add catalyst and agitate using a jiffy paddle and low speed drill (400-600 rpm). Agitate for 2 minutes, and then scrape sides of container and mix for an additional minute. Avoid generating air bubbles and foam. Consider mixing small batches to reduce potential waste. To avoid exothermic reaction in mixing container, do not let mixed components sit in container. Immediately, pour the mixed binder resin onto the floor to be coated. Spread or finish material according to application instructions contained in STI Technical Manual.

## 3. Warranty

STI Quartz N<sup>2</sup> Systems are installed by STI Associate Contractors and are available with the STI Single Source Limited Warranty for Labor and Material. This Product Data Sheet is for your information and is neither a contract nor a product warranty. Your installation contract is provided by your STI Associate Contractor. STI's warranty to you is made solely in the STI Single Source Limited Warranty for Labor and Material. Contact your Associate Contractor for the specific warranty document.

## 4. Maintenance

SeamTek Systems are hard seamless surfaces that will provide years of life with little maintenance. For more detailed maintenance instructions, please request STI Floor Maintenance Instructions. Periodic inspections by your STI Associate Contractor are recommended to discuss ways to extend the life of the floor care.

### Material Components/Ratios and Spread Rates

Type 1 is designed to be a nominal 110 mils thick. It is called a composite system; the resins and ratios are as follows:

- 1) Fiberglass in 8124 resin and MEKP activator @ 2%; put dry glass on floor and wet with 8124 to saturate (roughly 9 gallons per 1000 sf or 14 mils).
- 2) Body coat and flake using 4101 resin and CU90 activator @2% @! Roughly 18 mils
- 3) Broadcast flakes @ roughly 5 sq per pound
- 4) Lockout coat with 8050 resin and MEKP activator @ 2% (130 sq ft / gallon or 12.3 mils)
- 5) Seal coat with 1033 resin and UV light (no activator necessary) (300 sq ft/ gallon or 5 mils)

Your STI Associate is:

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