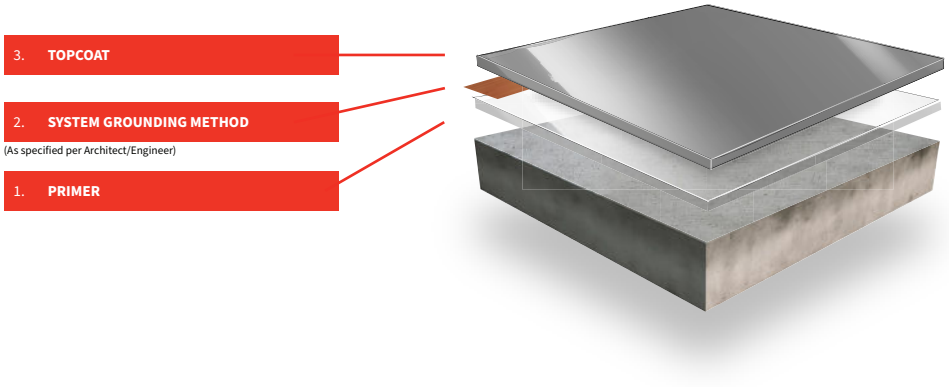
26 Mils

CrownESD Static Dissipative

Technical System Sheet (TSS)

SYSTEM DESCRIPTION

CrownESD Static Dissipative system is designed to be placed at 26 mils. The Static Dissipative system is designed to be placed over an isolation primer. The system is comprised of an isolation primer and static dissipative build coat. It passes ANSI/ESD STM 97.1 Floor Materials and Footwear – Resistance in Combination with a person. The recommended maximum system resistance is 5 x 10^7 ohms/sq. It passes ANSI/ESD STM 97.2 Floor Materials and Footwear - Voltage Measurement in Combination with a person. The recommendation maximum voltage allowed is 100 volts.



SYSTEM COMPOSITION

1. **352 CrownShield® Epoxy**
2. **System Grounding (Not Supplied)**
3. **8602 StaticShield**

TYPICAL USES

- Electronics Manufacturing
- Data Processing facilities
- Military/Aerospace
- Printing Plants
- Photographic/Graphic Arts Studios
- Pharmaceutical/Clean Rooms

BENEFITS

- Conforms to ANSI S20.20-2014 when tested in accordance with ANSI STM 97.1
- Body voltage generation under 15V with ESD compliant footwear.
- Consistent resistance measurements are observed when testing in accordance with standard methods.
- Crown ESD will impart static dissipative resistance readings as a standalone topcoat on top of a standard epoxy concrete primer such as Crown 352 or Crown 8303 MVB.
- Tough, smooth, non-porous surface is easy to clean and maintain.
- Good abrasion resistance.

PHYSICAL PROPERTIES

TENSILE STRENGTH	ASTM D638	2,500 p.s.i
TENSILE ELONGATION	ASTM D638	10%
WATER ABSORPTION	ASTM D570	0.1%
ADHESION TO CONCRETE	ASTM D7234	>400 p.s.i Concrete Failure
STATIC RANGE | 1 MILLION TO 1 BILLION OHMS	1 x 10^6 to 1 x 10^9 ohms/sq	Meets
BODY VOLT GENERATION	<15 Volts	Meets
5,000 Volt Charge Dissipation to 0 Volts	<0.1 Seconds	Meets

*The above physical properties were measured in accordance with the referenced standards. Results may vary based upon statistical variations on mixing methods, equipment, application methods, environment, actual site conditions, and curing conditions. All sample preparation and testing are conducted in a laboratory environment and actual performance on job site may vary from these values based on actual site conditions.

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CONCRETE

Concrete must be structurally sound. Concrete should be properly cured and have a minimum compressive strength of 3,000 psi and a minimum surface tensile strength of 250 psi prior to coating application.
Concrete substrate should have a minimum Floor Flatness Tolerance level of FF30 per ASTM E 1155 unless otherwise specified.
Concrete finish shall be steel troweled.
Surface shall be clean and free of all contaminants and bond breakers. Contaminants include, but are not limited to organic hydrocarbon materials, calcium chlorides and aluminum stearates.
Concrete flooring slabs can lose their structural strength over time, caused by conditions beyond the control of the flooring manufacturer or the installation contractor. If the concrete substrate deteriorates sufficiently, it will no longer support the bond of the remediation floor system.
Such conditions are detailed in ACI 201.2R "Guide to Durable Concrete" published by the American Concrete Institute. See Crown Polymers Technical Bulletin: 1 Concrete Surface Preparation

SUBSTRATE DIAGNOSTICS

Test concrete compressive strength using a Schmidt or Rebound Hammer to ensure substrate has compressive strength of 3,000 psi or higher.
Perform a pH test using concrete pH test strips or meter to ensure substrate pH is between 9-12.
Perform Moisture Test using either Calcium Chloride per ASTM F1869 or In-Situ Relative Humidity Probe per ASTM F2170. Refer to appropriate Technical Data Sheet limits and Crown Polymers Technical Bulletin: 6 Moisture Mitigation Negative Side Moisture Barrier.

SURFACE PREPARATION

Use Mohs scratch test to determine concrete hardness for proper concrete preparation method.
Concrete should be mechanically profiled and prepared to produce appropiate Concrete Surface Profile (CSP) per ICRI Guideline no. 310.2R. See CrownTech Bulletin 1: Concrete Surface Preparation and refer to individual product Technical Data Sheet (TDS) for desired CSP level.
All perimeter areas of coating termination shall be masked for protection. Saw cut and key-in all termination points.

SURFACE REPAIR

All depressions, divots and cracks should be profiled and free of dust and contaminants. Repair surface imperfections to reduce the ability to see the defect through the coating.
Honor all dynamic (moving) joints, static joints may be filled, use dynamic joints as initiation and termination points during application process where needed.

CLIMATE EVALUATION

Ambient and substrate temperatures should be above 50°F and a minimum of 5°F above Dew Point for ideal dry times. Refer to product Technical Data Sheet (TDS) for application temperature ranges.
Product temps should be between 70-80°F.
Atmospheric Relative Humidity should not exceed 80% during application. See CrownTech Bulletin 7: Temperature & Relative Humidity

REFER TO SAFETY DATA SHEETS (SDS) FOR SAFETY PRECAUTIONS.

SAFETY PRECAUTIONS MUST BE FOLLOWED DURING STORAGE, HANDLING AND USE.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

SHALL BE WORN AT ALL TIMES INCLUDING BUT NOT LIMITED TO LONG SLEEVE SHIRTS OR DISPOSIBLE ARM SLEEVES, SAFETY GLASSES, DISPOSIBLE NITRILE GLOVES, AND PROPERLY FITTED NIOSH RESPIRATORS

ALL SOURCES OF IGNITION SHOULD BE TURNED OFF AND ENVIRONMENT SHOULD HAVE PROPER AND ADEQUATE VENTILATION DURING APPLICATION AND CURING PROCESS

MIXING AREA SHOULD BE PLACED ON OR IN CLOSE PROXIMITY TO PROJECT. AREA SHOULD BE SECURELY COVERED WITH PLASTIC, CARDBOARD OR TARP. STAGE MATERIALS , TOOLS AND CLEANING SUPPLIES IN MIXING AREA PRIOR TO APPLICATION PROCESS.

MIXING

For ease of mixing and placement, the temperature of the "A" and "B" components should be between 70°F to 80°F (20°C to 26°C). Pre-mix the "A" and "B" component to ensure all raw material and pigments are dispersed uniformly. See Crown Polymers Technical Bulletin: 10 Mixing Guidelines and refer to Individual products Technical Data Sheet (TDS) for mixing procedures.

APPLICATION

Please refer to each individual product's Technical Data Sheet (TDS)for Application Instructions.

CLEAN-UP

Clean-up mixing station, tools, and equipment as required. Use acetone, a VOC exempt solvent, for cleaning up. Observe all legal, and health, and safety precautions when handling or storing solvents and materials, particularly in confined spaces. Make sure the working areas are well ventilated at all times during placement and curing time.

DISPOSAL

Dispose of empty packaging and other waste in accordance with federal, state, provinces and local regulations.

CHEMICAL RESISTANCE

See Crown Polymers Technical Bulletin: 9 Chemical Resistance Guidelines and Chart.

SLIP RESISTANCE

Skid-Resistance – Field (in situ) Wet Dynamic Coefficient of Friction (DCOF), ANSI A326.3. See Crown Polymers Technical Bulletin: 4 Coefficient of Friction.

MAINTENANCE

Inspect the installed floor by spot cleaning and spot repairing the damaged or cracked areas. To prolong life of the flooring system, a daily maintenance program is highly recommended to ensure the floor is safe for its intended purposes. See Crown Polymers Technical Bulletin: 8 Care and Maintenance.

TECHNICAL SUPPORT

For questions, contact a Crown Polymers Representative. Additional Support Documents are available from Crown Polymers, including brochures, application guidelines, videos and more. Visit Crownpolymers.com or contact Crown for additional resources

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