

staticWorx[®]
GroundSafe[®] ESD Flooring



ShadowFX[®] PosiTile[®] Modular Flooring
One-to-one every time

POSITILE + STATICWORX SHADOWFX CARPET TILE



The Simple, Smart Solution for Access Floors

We've partnered with Tate to offer our modular carpet as PosiTile—their carpet tile solution for access floors. It's the smart way to go for workspaces that need easy access to underfloor cabling and wiring but want the warmth and beauty of soft flooring. You get all the performance and aesthetic benefits of StaticWorx modular carpet along with the full flexibility of an access floor using the one-to-one fit of PosiTile.

How does it work?

Four ultrasonically welded buttons on the underside of each carpet tile precisely align with four matching holes in Tate's ConCore® panel, making the carpet tile and access panel one unit. This eliminates the need for glue and makes reconfiguration quick and easy. Even service boxes or diffusers move faster and create less waste because there's no need to cut new carpet tiles to fit.

What's in it for you?

- True one-to-one solution with carpet tiles indexed directly to individual panels
- Easy to move above floor electrical outlets and HVAC modules
- Less down time for staff during moves or reconfiguration
- Faster installation and occupancy
- Reduced carpet waste and attic stock
- Environmentally responsible carpet tile and access panels
- Available in almost 50 StaticWorx carpet tile product/color combinations
- High performances static control properties

PRODUCT ShadowFX GRAND TETON/GRAND TETON ACCENT

GLUELESS – THE ULTIMATE GLUE-FREE SOLUTION FOR CARPET TILE AND ACCESS FLOORS

StaticWorx and PosiTile make it easy to add the visual appeal, comfort and acoustical benefits of carpet over your access floor system without the hassle and mess of traditional adhesives. PosiTile simply aligns with the ConCore panel for a secure, one-to-one fit with zero glue. The carpet tile and panel become one unit, making it fast and easy to reconfigure spaces. And with no messy glue involved, changing out a soiled or damaged carpet tile is a snap.



- No waiting for glue to dry
- Easy to install – just snap carpet into panels
- Easy to move above floor electrical outlets and HVAC modules
- Less down time for staff
- Reduced carpet waste and attic stock
- Install in occupied spaces

STATICWORX ESD MESSAGE TILES

Another Benefit: Defining the Boundaries of Your ESD Protected Areas

The edges of your ESD-Protected Areas (EPAs) should be well-marked, particularly in high-traffic areas such as entrances and exits where employees travel back and forth between protected and unprotected areas. Labeling these boundaries helps prevent the improper transportation of ESD-sensitive electronics out of the protected area. Clearly marked boundaries also caution employees, in addition to plant visitors, to take proper precautions, such as wearing ESD-approved footwear, before entering an EPA.

StaticWorx offers ESD messaging tiles for our modular vinyl, rubber, and carpet tiles. Our message tiles seamlessly match the StaticWorx flooring installed at your site. So, define your ESD-protected areas and protect your bottom line.

An Excerpt From ESD Prevention Document ANSI/ESD S20.20

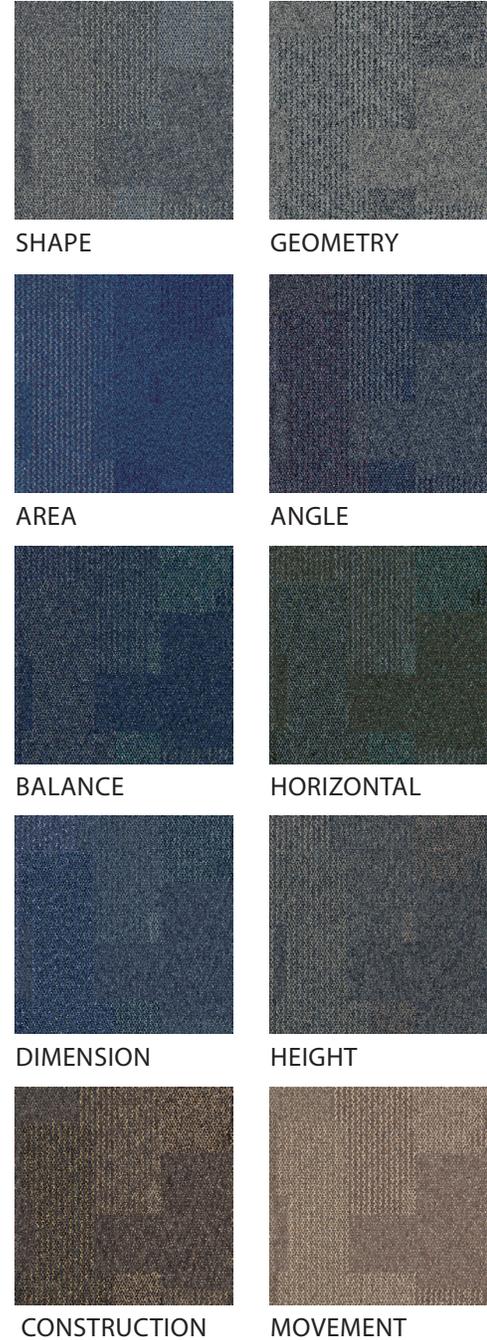
Transportation of ESDS items outside an ESD Protected Area (hereafter referred to as "EPA") requires enclosure in static protective materials, although the type of material depends on the situation and destination. Inside an EPA, low charging and static dissipative materials may provide adequate protection. Outside an EPA, low-charging and static-discharge shielding materials are recommended. While these materials are not discussed in the document, it is important to recognize the differences in their application. For more clarification, see ANSI/ESD S541.



SHADOWFX CUBIC SERIES



PRODUCT ShadowFX CUBIC COLOR HORIZONTAL



Specifications

Modular, 24in x 24in		Soil/Stain Protection	Protekt ² [®]	 <p>Non-directional</p>
Backing System	GlasBac [®] Tile	Pile Thickness	0.093 in., 2.4 mm	
Yarn Manufacturer	Aquafil	Pile Density	6,968/yd ³	
Yarn System	100% Recycled Content Type 6 Nylon	Total Recycled Content	59%	
Color System	100% Solution Dyed	Indoor Air Quality	CRI Green Label Plus #GLP0820	
Construction	Tufted Textured Loop	Resistance	1.0 x 10E6 - 1.0 x 10E9 ohms	
Preservative Protection	Intersept [®]	Body Voltage:	< 50 volts Meets ANSI/ESD S20.20-2014	

SHADOWFX PARKS SERIES



PRODUCT ShadowFX PARKS COLOR BANDELIER



MOJAVE



NORTH COUNTRY



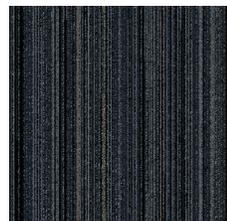
GATEWAY



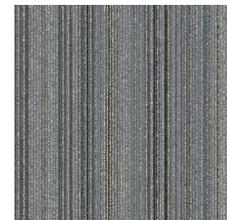
RUSHMORE



BANDELIER



GETTYSBURG



GRAND TETON



LAKE MEAD

Specifications

Modular, 24in x 24in

Backing System GlasBac® Tile

Yarn Manufacturer Universal

Yarn System Post-Consumer Content Type 6,6 Nylon

Color System 100% Solution Dyed

Construction Tufted Textured Loop

Preservative Protection Intersept®

Soil/Stain Protection

Pile Thickness

Pile Density

Total Recycled Content 68%

Indoor Air Quality

Resistance

Body Voltage:

Protekt²®

0.079 in., 2.0 mm

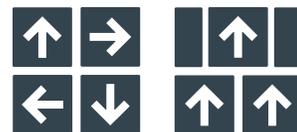
6,835/yd³

CRI Green Label Plus #GLP0820

1.0 x 10E6 - 1.0 x 10E9 ohms

< 100 volts

Meets ANSI/ESD S20.20-2014



Quarter-turn

Brick

SHADOWFX PARKS/ACCENT SERIES



MOJAVE/ACCENT



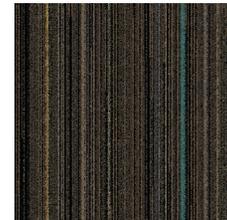
NORTH COUNTRY/ACCENT



GATEWAY/ACCENT



RUSHMORE/ACCENT



BANDELIER/ACCENT



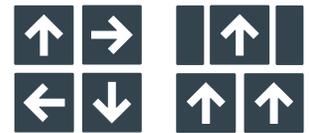
GETTYSBURG/ACCENT



GRAND TETON/ACCENT



LAKE MEAD/ACCENT



Quarter-turn

Brick

Specifications

Modular, 24in x 24in

Backing System GlasBac® Tile

Yarn Manufacturer Universal

Yarn System Post-Consumer Content Type 6,6 Nylon

Color System 100% Solution Dyed

Construction Tufted Textured Loop

Preservative Protection Intersept®

Soil/Stain Protection Protekt²®

Pile Thickness 0.079 in., 2.0 mm

Pile Density 6,835/yd³

Total Recycled Content 68%

Indoor Air Quality CRI Green Label Plus #GLP0820

Resistance 1.0 x 10E6 - 1.0 x 10E9 ohms

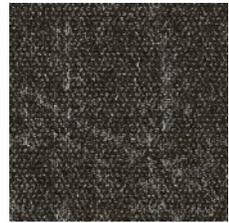
Body Voltage: < 100 volts

Meets ANSI/ESD S20.20-2014

SHADOWFX VERMONT SLATE SERIES



VERMONT BLACK BEAR



RED PINE BARK



CEDAR WOOD



NORTHERN HARDWOODS



BLACK MAPLE



OTTER CREEKBED



WHITE RIVERBED



CHAMPLAIN SHORELINE



CASPIAN SHORELINE



WILLOUGHBY SHORELINE

Specifications

Modular, 24in x 24in

Backing System GlasBac® Tile

Yarn Manufacturer Universal

Yarn System Post-Consumer Content Type 6,6 Nylon

Color System 100% Solution Dyed

Construction Tufted Textured Loop

Preservative Protection Intersept®

Soil/Stain Protection Protekt²®

Pile Thickness 0.071 in., 1.8 mm

Pile Density 8,620/yd³

Total Recycled Content 59%

Indoor Air Quality CRI Green Label Plus #GLP0820

Resistance 1.0 x 10E6 - 1.0 x 10E9 ohms

Body Voltage: < 100 volts
Meets ANSI/ESD S20.20-2014

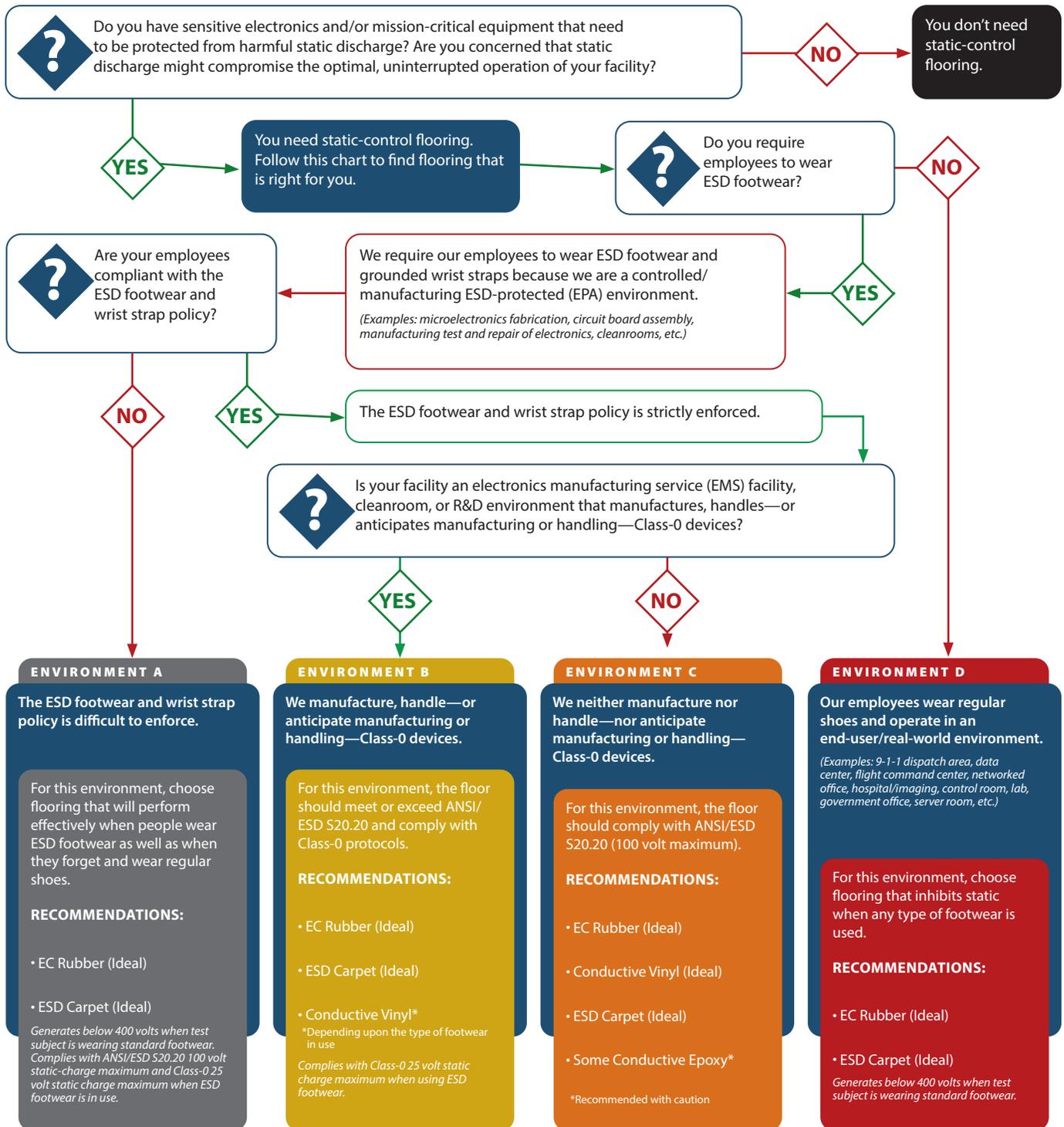


Non-directional

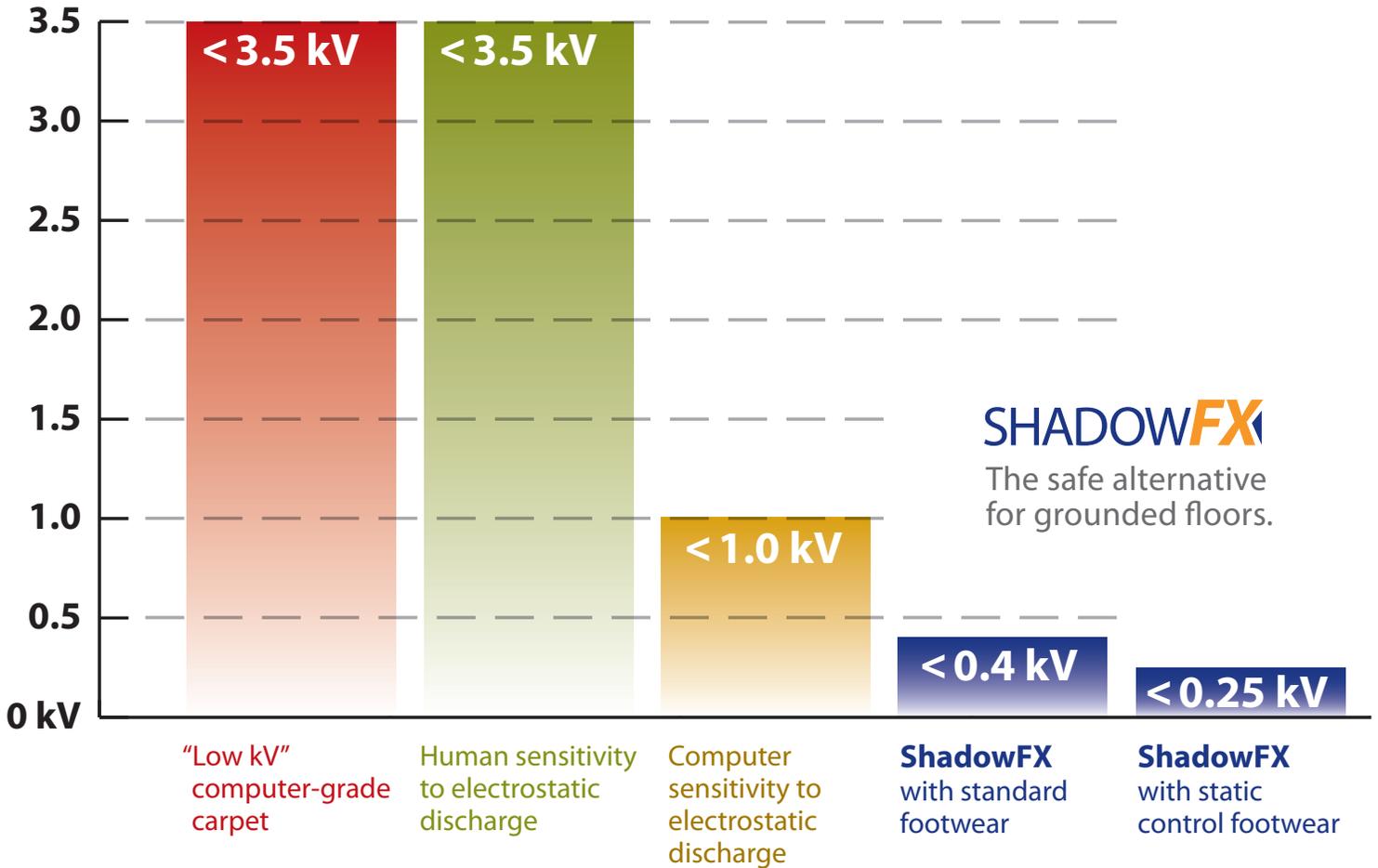


Monolithic

FLOORING SELECTOR GUIDE



ESD SENSITIVITY CHART

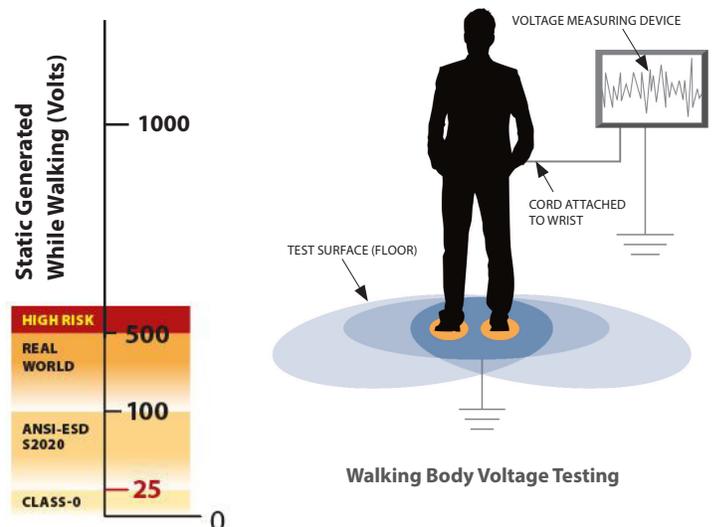


To feel a static shock, a person must be subjected to a charge of at least 3500 volts. Any static charge under 3500 volts won't be felt and can damage sensitive electronics without a person being aware that ESD damage has occurred.

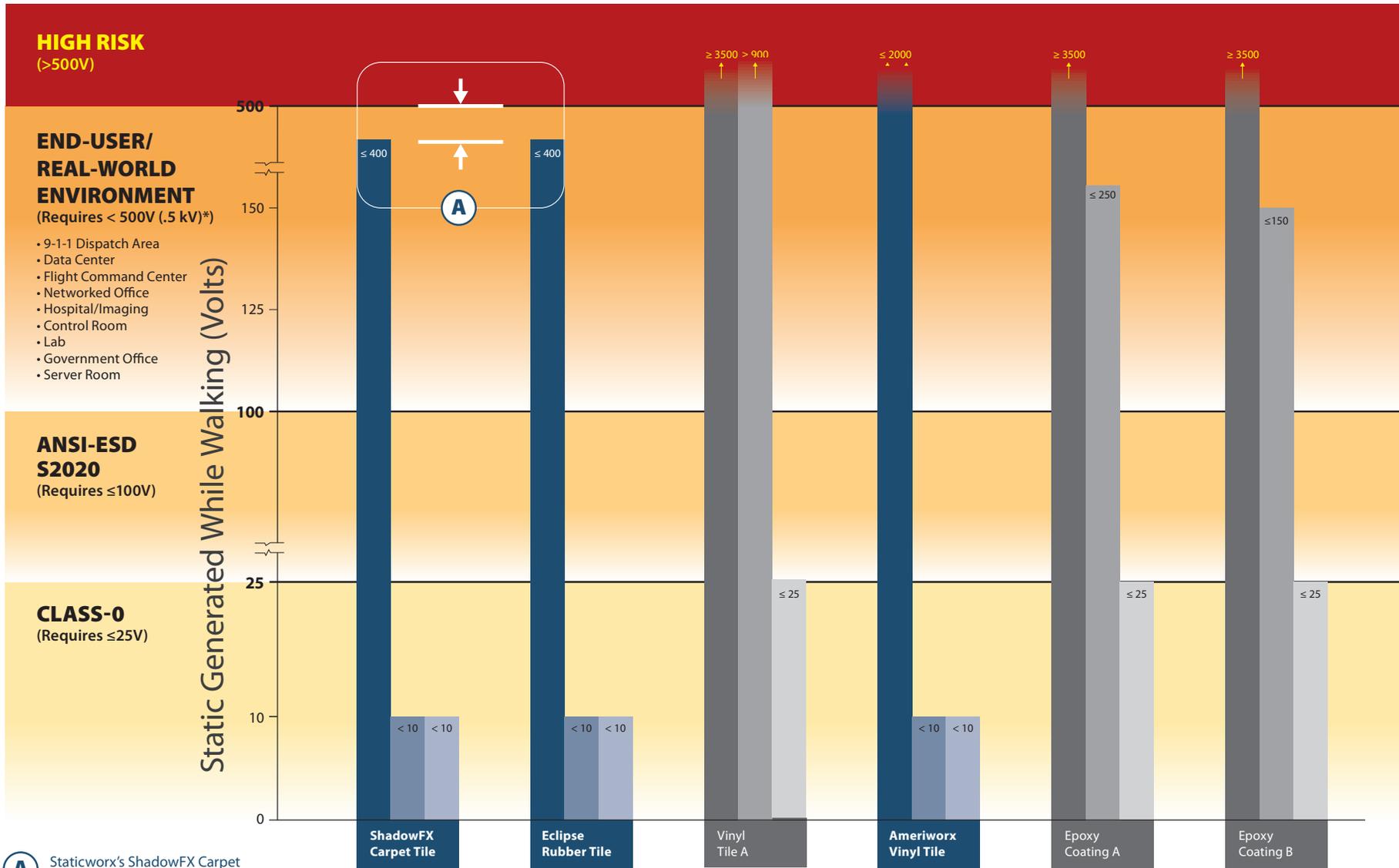
Comparatively, static charges as small as 25 volts can damage sensitive electronics and/or destroy electronic data. A charge this small would need to be made 115 times stronger just to be perceptible by a person.

Walking body voltage tests conducted by Fowler Associates, in their independent ESD-testing lab.

**ASHRAE has established a body voltage maximum of 500 volts (.5 kV) for service operations. The ASHRAE study was conducted at the University of Missouri, Science and Technology, Rolla, MO, U.S.A. under the guidance of Dr. David Pommerenke.*



BODY VOLTAGE GENERATED WITH DIFFERENT TYPES OF FOOTWEAR



A Staticworx's ShadowFX Carpet Tile and Eclipse Rubber Tile both test well below the 500V high risk zone, providing a safe buffer and allowing workers in End-user/Real-world Environments to safely wear regular, everyday footwear.

Flooring Used With Different Footwear

Flooring type with regular footwear
 Flooring type with ESD heel strap
 Flooring type with ESD shoes
 Staticworx flooring with regular footwear
 Staticworx flooring with ESD heel strap
 Staticworx flooring with ESD shoes

ESD STANDARDS BY APPLICATION

ANSI/ESD S20.20 – 2014

ESD Association Standard: Provides guidelines to protect electrical and electronic parts, assemblies and equipment from electrostatic discharge.

- **Handles Class-0**
ANSI 20.20 (< 20 volts) — in addition to compliance with Class-0 protocols
- **Does Not Handle Class-0**
ANSI 20.20 (100 volt maximum)

IEC 61340-5-1:2007 IECEE.ORG

The European equivalent to ANSI/ESD S20.20.

See ANSI 20.20 - 2014 (above)

Applications

- Electronics Manufacturing
- Microelectronics Fabrication
- Circuit Boards Assembly
- Electronics Test and Repair
- Cleanroom
- R&D
- Computer Manufacturing
- Military Base Electronics

• FAA STD 019f

Standard for lightning protection, grounding, bonding and shielding requirements.

• MOTOROLA R56

Public safety and telecommunications standards and guidelines for the installation of equipment, infrastructure, and facilities for communications centers.

• ATIS-0600321

Telecommunications industry standard for applications where people access a computer keyboard while continually wearing a headset.

Applications

- All network-operator dispatch operations— e.g. 9-1-1 call centers
- Mission-critical Call Centers
- Communications Centers
- Networked Offices
- Government Mission-critical Areas
- Control Rooms
- Flight Towers
- All FAA/flight support areas (and 019e designation)

• DOD 4145.26-M

Safety standards for Department of Defense and private industry ammunition and explosives (AE) operations.

Applications

- Defense Contractors
- Facilities performing AE work
- AE Services
- Companies Covered Under DoD

NFPA 99 National Fire Protection Association-Defunct Standard for Conductive Flooring

Establishes criteria for health care services to minimize the hazards of fire, explosion, and electricity.

In 2015, all references to conductive flooring were removed from this standard.

Applications

No longer valid

Mil STD 1686 (converted to ANSI/ESD S20.20)

The parent document for all ESD Association standards and is the main reference for Auditing an ESD Control Program.

Applications

Anyone auditing an ESD program

• IBM Data Center Recommendations

IBM-recommended guidelines to minimize static-electricity buildup in data centers. Safety recommendation: minimum floor resistance >150,000 ohms (1.5×10^5).

Applications

- Data Centers
- Server Rooms

ESD Test Methods

ANSI/ESD STM7.1-2013

Tests resistive properties of flooring materials.

ANSI/ESD STM97.1-2015

Measures the electrical system resistance of floor materials in combination with persons wearing static-control footwear.

ANSI/ESD STM97.2-2016

Measures the voltage on a person in combination with floor materials and static control footwear, shoes or other devices.

ASTM F150-06(2013)

Tests electrical resistance of resilient flooring.

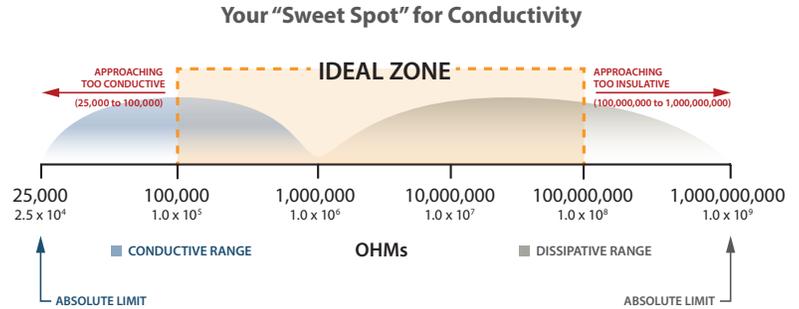
AATCC 134

Electrostatic Propensity of Carpets. Standard carpet industry test, uses laboratory simulation to assess static generation when a person walks across the carpet.

TESTING A FLOOR'S ELECTRICAL RESISTANCE

Electrical resistance tests use an Ohm meter to predict the speed at which an ESD floor will discharge electricity, allowing the charge to pass from the floor's surface to ground.

If resistance is too low, electrical currents can cut across the floor, posing a safety hazard. If it's too high, static will discharge too slowly, rendering the floor ineffective.



All Staticworx static-control flooring tests within the safe range (sweet spot) shown above.

TO MINIMIZE LIABILITY, KNOW & COMPLY WITH ESD STANDARDS FOR YOUR INDUSTRY

Depending upon the application, conductive carpet may not be an approved option, based on industry standards and local codes. Mission-critical operations, such as call centers, control rooms, server rooms, etc., require static-dissipative floors--not conductive. A spec sheet listing a resistance range of 2.5×10^4 – 1.0×10^8 ohms is too broad to meet standards requiring dissipative flooring: Measurements at the low end of the range are conductive. It doesn't matter who the supplier is or which customers are already using the material. The floor does not comply with approved industry standards. To protect a mission-critical space, the range must be 1.0×10^6 – 1.0×10^9 ohms.

To minimize your liability, we always recommend that, after the installation has been completed, you require written certification from your supplier that the floor meets the standard you referenced.

When you write a spec for static-control flooring, you accept responsibility. You don't need to be an engineer to figure out what you need: The standards organizations have already done the math.

ESD Test Methods

ANSI/ESD STM7.1-2013

Tests resistive properties of flooring materials.

ANSI/ESD STM97.1-2015

Measures the electrical system resistance of floor materials in combination with persons wearing static-control footwear.

ANSI/ESD STM97.2-2016

Measures the voltage on a person in combination with floor materials and static control footwear, shoes or other devices.

ASTM F150-06(2013)

Tests electrical resistance of resilient flooring.

AATCC 134

Electrostatic Propensity of Carpets. Standard carpet industry test, uses laboratory simulation to assess static generation when a person walks across the carpet. Electrostatic Propensity of Carpets. Standard carpet industry test, uses laboratory simulation to assess static generation when a person walks across the carpet.

SHADOWFX SPECIFICATIONS

- Resistance: ESD 7.1/NFPA 99
- Resistive Characterization of Materials: Nine or more readings between electrodes placed one foot apart. Tested with an applied voltage of 100V. Measured in Ohms, 1.0×10^6 – 1.0×10^9 .
- Meets Motorola R56 and ATIS-0600321 for use in telecommunications applications
- Meets FAA STD 019f for use in flight control applications.
- System resistance per ANSI/ESD S97.1: $< 3.5 \times 10^7$
- Charge generation per ANSI/ESD S97.2: < 100 volts
- Roller Caster Electrical Test (CET) proven. Product meets ANSI/ESD S20.20 after 125,000 cycles.

About StaticWorx

StaticWorx manufactures the highest quality ESD flooring products available today. Our company has installed tens of millions of square feet of ESD flooring throughout the U.S., Canada, Mexico, Australia, Singapore, New Zealand and the U.K.

Some of our clients include EMC Corporation, BAE Systems, Benchmark, Flex, Lockheed Martin, Microsoft, Philips Healthcare, Amazon, Apple, Intel, Google, and Facebook.

All StaticWorx products are made in ISO-9000 certified factories and undergo rigorous testing by independent laboratories prior to shipment.

For clients who prefer a worry-free project, StaticWorx will help choose the best floor for the specific application, match your project with our best flooring installation team, oversee the installation, and test your new floor's electrical properties to be sure the floor meets your specifications.

“The StaticWorx seminar may be the best AIA presentation I've sat through over the past 10 years. I recommend it to any architect or engineer that may have projects with static-control flooring.”

Brian Frels
AIA, NCARB - Principal ARIUM ae

To schedule a Zoom ESD training session or AIA (architects') CEU workshop, please contact us at info@staticworx.com
Or call: 617-923-2000

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