

## kV ratings OR Ohms Specifying the right product

### kV Ratings or Ohms? What's The Story?

When electrostatic charge generation is tested in accordance with AATCC 134-06 electrostatic propensity, the results are expressed in kilovolts (kV) and referred to as the carpet's kV rating or its anti-static properties. *But, that's only half the story!*

kV ratings are currently used by most specifiers as the measuring stick for any application which requires some type of static protection. Unfortunately, for the client who really needs static protection, settling on a product that has a low kV rating does not guarantee they'll be getting the degree of protection they need or expect.

*In many cases, there's no significant difference in kV ratings between the right product for the application and the wrong one.*

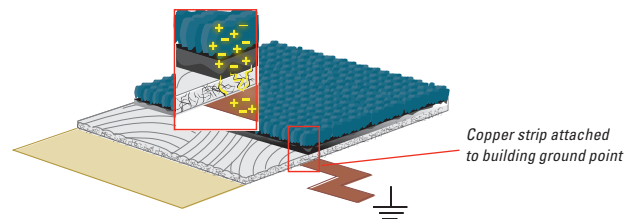
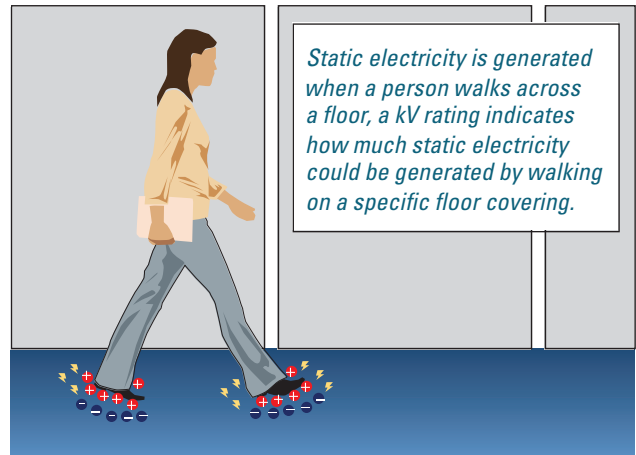
The kV rating ONLY indicates how much static electricity might be created by someone walking on the floor covering. It does not and cannot address whether the floor covering is capable of safely removing existing built-up electrostatic charges already on that person.

Fortunately, there is a second more relevant procedure for testing a carpet's ability to provide maximum static protection. The Electrostatic Discharge Association's Standard ESD S7.1/NFPA 99 Resistance Characterization of Materials is a test that measures electrical resistance, which is expressed in Ohms ( $\Omega$ ) rather than kilovolts (kV).

*Knowing a floor covering's electrical resistance is the ONLY way to determine how quickly and completely an existing electrostatic charge on a person can be eliminated or dissipated to ground. Lower resistance means faster electrostatic charge elimination.*

Higher resistance means a slower or no electrostatic charge elimination. Conductors (i.e. metals) have low electrical resistance and move static charges away to ground rapidly. Non-conductors or insulators (i.e. plastics, nylons, and fabrics) have high electrical resistance and cannot eliminate or remove electrostatic charges.

Based upon years of testing in laboratories and in environments where sophisticated computer and telephony equipment are manufactured, there is an established electrical



*The electrical resistance of a floor covering is measured in Ohms, and indicates how quickly and completely an existing static electric charge can be safely removed to a ground point.*

resistance range which has been proven to provide the maximum electrostatic protection to equipment and personnel without compromising safety. That range is  $2.5 \times 10^4$  Ohms to  $1.0 \times 10^9$  Ohms (see ESD S7.1/NFPA 99 Resistance Characterization of Materials).

*The right choice for static sensitive and mission critical applications is StaticSmart carpet because it provides both a low kV rating (ultra low electrostatic generation) and a low electrical resistance (rapid, safe removal and elimination of static electricity) to ensure maximum static protection for both people and electronics.*

If you have questions about KV ratings, Ohms resistance, or specifying static control flooring - feel free to contact a StaticSmart representative at (978) 276-0820, or email [info@staticsmart.com](mailto:info@staticsmart.com).