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ESD In Your Data Center may be a Shocking Problem

By David Loman, Director of Data Clean Asia

The high pressure laminate surface on a raised floor is a composite material that is designed to inhibit the generation of ESD (Electro Static Discharge). This material acts similar to a rubber mat to control the friction between shoes or chair wheels so that static does not build to a level where discharge is necessary. If the electric charge is kept at a low level, the ESD will not arc. It is the arc of ESD that can be damaging to sensitive electronic equipment.

As raised floor tiles get dirty, the dirt provides insulation or a layer on top of the laminate surface of the tile and this layer interferes with the ESD properties and allows the ESD to accumulate to a level where discharge is necessary. When ESD discharges from a persons foot or a roller chair, the static flows along the floor surface and discharges on data cables that stick up through the floor. This common scenario explains why failures often occur while people are in the data center. They are generating static just by walking.

Cleaning the surface of a raised floor is imperative for the proper operation and ESD dissipation. Scrubbing is actually necessary to remove the deep-down grime and oil buildup on raised floor panels. Data Clean uses special chemicals that allows the deep penetration into the dirt without harming the laminate surface. We use special 150 RPM scrubbers that allow us the properly scrub the floor without creating too much heat that will damage the laminate or the glue used to secure the laminate to the tile.

All equipment manufactures recommend quarterly cleaning of the raised floor surface to remove the dirt and debris and to maintain the ESD properties of the floor surface.