Technical Bulletin - Understanding Static Electricity and Decking Comfort

All materials have a tendency to give up electrons and become positive in charge or negative in charge.

Static Electricity is the collection of electrically charges particles on the surface of a material generated when a positively charged material comes into contact with a negatively charged material. Some materials cause or create more static electricity than others when combined with others.

We understand static electricity as the result of walking on wool carpet in our nylon socks.

The Triboelectric Series is a list of materials generated by how well they create static electricity when rubbed with another material as well as what charge the material will possess.

There are very few materials that do not tend to readily attract or give up electrons when brought in contact or rubbed with other materials. These are called…

Relatively Neutral
Cotton, Steel, Rubber and **Natural Wood**.

Materials that tend to attract electrons are called…

Negatively Charged
Wood treated with preservatives containing copper, hard rubber. Nickel, Copper, Brass, Silver, Gold, Platinum, Polyester, Styrene (styrofoam), Polyurethane, Polyethylene (used in composite decking), Polyethylene (used in composite decking), Polypropylene (used in composite and recycled plastic decking), Vinyl/PVC (used in PVC decking), Silicon and Teflon.

Materials that tend to give up electrons are called…

Positively Charged
Human Skin, Leather, Fur, Glass, Hair, Nylon, Wool, Lead and Silk.
Why is this important in the selection of decking materials?

The combination of either a positively or negatively charged material with a neutral material like natural wood provides no opportunity for static discharge.

The combination of any negatively charged composite, plastic or PVC decking product with a positively charged material like your skin can result in static electrical discharge or shock.

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