Anti-static Report
Polyglide Slide Sheets

Bainbridge International Pty Ltd have independently tested the anti-static properties for **Polyglide & Dragon Cloth** slide sheets in a NATA registered laboratory

Doctors and theatre staff have expressed concerns about the potential of slide sheet material building up a static charge which could be capable of generating a spark which in turn could ignite flammable gases or liquids used in theatre.

Static charges can be felt at 3,500 volts, heard at 4,500, and seen at 5,500 volts The most familiar form of static is separating two surfaces or rubbing two surfaces together called triboelectric charging. A statically charged object not only holds a charge but creates a static field around it. Any object which is charged will eventually dissipate over time to zero voltage. Should this object be grounded it will dissipate immediately.

Different materials generate different levels of voltage. Generally synthetic materials like Polyester or Nylon generate larger voltages than natural materials like Cotton or Wool. People generate charges as well. For example, a person walking across carpet can generate charges in excess of 35,000 volts, walking on vinyl 12,000 volts, sitting down in a chair 6,000 volts. Even opening up a plastic bag will generate charges of 20,000 volts. Once someone touches an earth the charge is immediently dissipated.

Other items like plastic trays, hoses, rubber fittings, barrier theatre gowns and drapes can also generate charges in excess of 20-30,000 volts.

Polyglide & Dragon cloth was tested to ascertain what voltages we could produce by repeatedly rubbing the surfaces of the fabric together. The Static charge generated was only 1,200 volts positive which was measured using a fully calibrated ACL Digital Static Field analyser.

If we compare this minimal voltage created under these laboratory conditions, it is very small compared to someone walking across a vinyl floor and generating 12,000 volts or a plastic tray generating 20,000 volts.

These larger static charges are very rarely capable of creating sparks, which could ignite flammable chemicals or vapours. 90% of ignition problems have not come from insulative fabrics like these, but electrostatic discharge between 2 metal objects.

Generally, grounding equipment in theatre and having good air extraction systems to remove flammable aerosols are the best way to control static ignition problems.

In conclusion, we feel that the static charge generated by **Polyglide & Dragon Cloth** slide sheets is minuscule compared to many other objects and materials which are currently being used in theatre.

Should you require any further information please call the Bainbridge office.

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