What Material Is the Most Shocking?

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The goal of this project was to test different materials to see which ones produced the most static electricity. The materials were rubbed against a balloon for one minute, and then the balloon was placed over the punched pieces of paper to see how many were picked up. The researchable question was which materials out of tin foil, duct tape, a plastic sandwich bag, corrugated cardboard, and 100% polyester created the most static electricity. I expected that the plastic bag would generate the most static electricity but instead, the corrugated cardboard picked up the most amount of punched pieces of paper. Since the humidity can affect static electricity, the humidity and temperature were also recorded while conducting the experiment. It appears that the humidity did affect the results to some degree, since trials 3 and 4 seemed to have lower total amounts of static electricity. The humidity in trials 3 and 4 were higher than the humidity in trials 1 and 2. The results of this research can be useful to companies that store products in bulk containers where static electricity can build up causing fires and explosions.

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