

Ideal Shield Sleeve Testing Results

Ideal Shield commissioned independent testing using the Ideal Shield ¼" and 1/8" bumper post sleeves compared to two other manufacturers' 1/8" sleeves. We wanted to see how well our sleeves and the competitions sleeves held up after impact, because this is the main purpose of the bollards. Each sleeve was struck in the same spot, at the same rate of force (100 Joules).

The Results

All samples were dented after impact.

Ideal Shield's ¼' sleeves fully returned to their original shape

The Ideal Shield 1/8" sleeve fully returned to their original shape

The other manufacturer's sleeve samples were still dented after 2.5 hours of observation.



Sleeves immediately after impact

What this means for the end user:

- The dome top bumper post sleeve is more resilient than flat top models.
 - Curved surfaces are stronger than flat surfaces. Take three sheets of material. If one sheet were curved along one axis to make a half cylinder, the strength would be several times that of a flat roof. If a sheet of material were curved along both axes to make a dome, the strength would be greater still. Surfaces curved in two dimensions can be 40 times stronger than flat surfaces.
Source: "Engineering Principles." Engineering Principles. N.p., n.d. Web. 20 Apr. 2016.
 - A dome is a structure that looks like the top half of a sphere or an egg. Like an arch, a dome directs compression force downward. In an arch, the compression force occurs in only one plane of application. However, in a dome, the compression force is directed downward in many planes at once. You could consider a dome to be a series of arches that have been connected at a center point.
Denney. "Making Structures Strong." (n.d.): n. pag. Web. 20 Apr. 2016.
- The dome top bumper post sleeve is the most durable sleeve on the market, making it ideal in high traffic or heavy industrial/manufacturing environments.
- Ideal Shield's bumper post sleeves, both ¼" and 1/8", provide cost savings through lower levels of replacement and higher quality product.