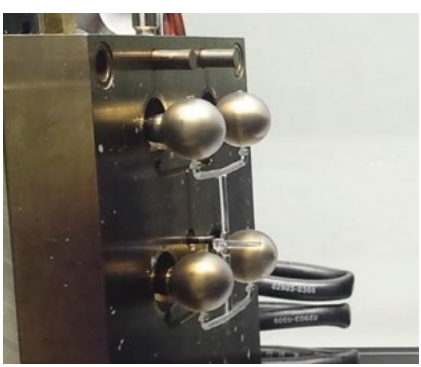
Small globes

Globes of various sizes and shapes are a common element in lighting designs. Traditionally, these globes were either blow-molded in glass, or could be molded in two halves and glued or welded together out of plastic. With the introduction of moldable silicone optical materials, these types of devices can now be injection-molded in one piece. Additionally, the combination of the injection molding process and the material's ability to reproduce fine features allows for the incorporation of surface patterning or other options. This material gives lighting designers much greater flexibility than traditional methods allow.

These globes take advantage of the elasticity and toughness of moldable silicones. They are molded in one piece over a mandrel, in a closed injection mold. After curing, the mold is opened and the globes are removed from the mandrel, by stretching with air pressure to 'pop' off. In fact, some are stretched more than the elongation value shown on the product data sheet, but return to the cured shape after de-molding. This is possible since the parts have not yet been post-cured to their ultimate hardness.



There are several different mandrels used for the interior of these globes; wall thickness varies from the neck to the tip. Much like metals can be made in wide flats for springs, or shaped as an I-beam for structural support, the variable cross section dramatically alters the feel of these globes.

Points to note:

- Globes are molded in one piece, whereas plastic would be made in two pieces and glued or welded together.
- Stiffness variation exists between parts; squeeze the bulbs and note the stiffness variation with thickness.
- Globes have a polished interior with a diffuse or matte finish (bead blast) exterior.
- Other features or structures could easily be reproduced in the part.

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