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## Caps for Surface Finishing

BY JOHN GILL, CAPPLUGS . POWDER COAT . 10 JULY 2020

Not all caps are created equal. In addition to the differences in inside diameter and length, there are a number of materials that masking caps can be made from. It is now quite easy to find masking caps to suit your finishing process.

At one time there wasn't much variety when it came to caps for masking. The choices were silicone caps or vinyl caps. Silicone caps stretch to cover a range of diameters; vinyl caps are more ridged. These days, however, masking caps are manufactured in a range of materials including EPDM rubber, which has similar temperature properties to vinyl, but stretches like silicone. With developments like this, it is worth reviewing the variety of masking caps that are available.

**Silicone Caps.** Generally, for higher temperature finishing processes, silicone caps are the most widely available cap. They usually have a domed top and come in a series of standard lengths and diameters. Silicone caps are usually color-coded so you can identify the different inside diameters. As they are silicone, the maximum temperature for silicone caps is 600° F (315° C). Silicone caps are made by compression molding, so non-standard lengths require tooling. Compression molding tools, however, are relatively inexpensive, so it is easy to have a specific diameter or length of cap to suit your application.

**Rubber Caps.** Commonly made from EPDM, rubber caps have a similar feel to silicone caps and can stretch in the same manner. They also have a domed top and come in a series of standard diameters and lengths. The main difference is the material that they are made from. Rubber caps are generally made from EPDM (ethylene propylene diene monomer rubber) and have a maximum temperature of 350° F (177° C). Like silicone caps, rubber caps are made by compression molding so specific diameters and lengths are possible.

**Vinyl Caps.** Vinyl caps have traditionally been used in wet paint applications as the maximum temperature for a general-purpose vinyl is 350° F (177° C). Vinyl caps have a flatter top than standard silicone and rubber caps although the top is not completely flat. Produced by dip molding, the vinyl cap tool is dipped into the liquid vinyl to produce the cap. This manufacturing method means that the length of a vinyl cap can be changed easily by dipping the tool further into the vinyl. As with silicone caps, vinyl caps can be color-coded to identify their size. Vinyl caps are also available in a high temperature vinyl which has a maximum temperature of 475° F (246° C)

**Paper Caps.** Again, traditionally for wet spray paint applications, paper caps are available. Often made from a percentage of virgin and post-consumer recycled material, paper caps can handle a maximum temperature of 400° F (204° C).

**LDPE Caps.** Traditionally developed and used for protection, LDPE caps can be known as plastic protection caps. LDPE (low-density polyethylene) is a plastic material that is injection molded into a shape. LDPE caps are ideal for wet spray paint applications and are usually available in a large variety of sizes and shapes. Tapered caps, straight sided caps, flanged caps, to name just a few of the available styles. LDPE can handle a maximum temperature of 175° F (79° C).

To explore caps further, contact a masking company who manufacture all these different caps, such as Caplugs, and ask them for samples so you can review the caps in your finishing process.

*John D. Gill is an Engineer with Caplugs Inc. John has experience in masking and surface finishing throughout the UK, Europe and USA. He works with Caplugs manufacturing facilities in the USA, Europe and China.*

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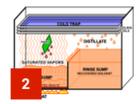

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