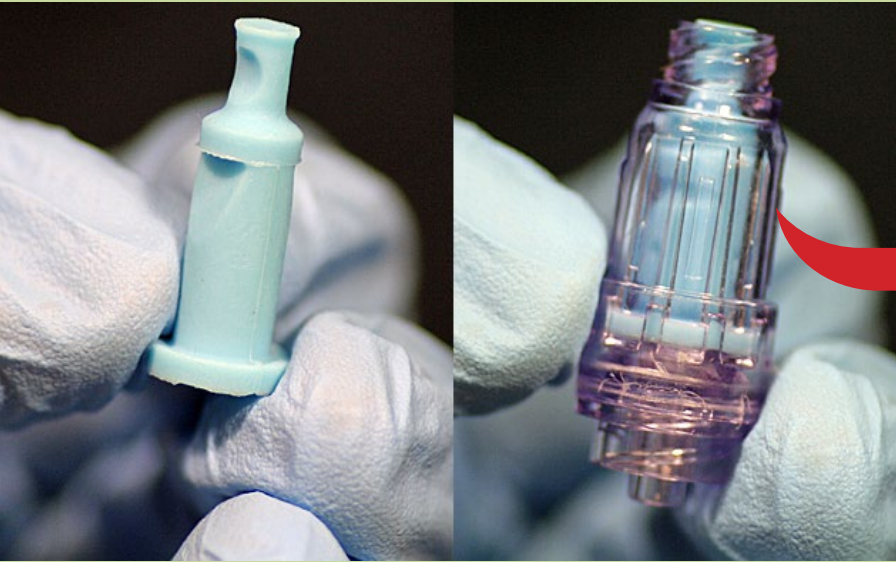


Dry Plasma Cleaning vs. Wet Cleaning Processes: Which method is best?

■ A partnership with TriStar gives you a competitive edge.



Molded silicone parts (left) are inserted into polycarbonate housings (right) by robots. The silicone pieces are inherently tacky and this interferes with the robot's ability to select them. This causes delays as production has to stop to manually separate the parts.

Manufacturers of devices like the one shown can spray silicone oil onto the molded part(s) to minimize sticking – but this is messy and the oil residue ends up downstream of the process.

The better solution is to plasma-treat the silicone parts to remove the tackiness.

Contamination is the greatest barrier to smooth bonding of materials. Yet most manufacturers use conventional [wet] cleaning methods such as chemical rinsing, vapor degreasing, or ultrasonic baths.

The challenge with wet cleaning methods is that despite appearing clean, there's usually organic residuals [machining oils, wax, grease, and polishing compounds], and dust left behind. Any of these will impede any attempt at surface bonding.

For best results, we recommend a [dry plasma cleaning](#). Plasma primes any surface for secondary manufacturing processes by removing all traces of contamination. It even removes the materials that wet cleaning methods leave behind.

Look to plasma cleaning to provide:

- A truly clean base surface for enhanced bonding
- Uniform 3-D coverage of the entire substrate [even complex geometries]
- Earth-friendly processing method to eliminate harmful solvents
- No impact on the dimensional tolerance of components
- Increased manufacturing yields
- Fewer in-field failures
- Lifetime treatment duration when compared to wet treatment methods

To review the benefits of plasma and other surface treatment, get your copy of our [Surface Modification white paper](#).

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