

## **Reusable Silicone Masking – Frequently Asked Questions (FAQ)**

- **What processes can the masks be used for?**

Aimtek provides reusable spray masking in a variety of materials for an array of processes, including: Plasma Spray, HVOF Spray, Flame Spray, Twin-Wire Arc Spray, Grit Blasting, Shot Peening, and Heat-Cured Painting. Beyond these well-known technologies, Aimtek works closely with its customers and partners to continually push the limits of reusable masking in new and emerging processes.

- **Do you have a catalog of standard masks?**

Aimtek does not maintain a catalog of standard masks for purchase. Aimtek tailors its masking solutions to the process conditions of each customer application, bringing deep experience in thermal spray and masking technologies to your projects. Aimtek believes this approach delivers the best process improvement results and maximizes returns, rather than a generic or incomplete solution.

- **How long does it take to develop a new masking solution?**

Aimtek is focused on individual solutions and responds to the needs of each project. The average projected turnaround for typical applications is six weeks from concept to delivery of prototype mask samples. Part size, complexity, and documentation quality all contribute to the pace of the development process. Customers processing multiple variations of similar parts will see acceleration on subsequent designs beyond the initial development, while Aimtek remains agile enough to partner with shops processing high-variety schedules.

- **How many cycles can the masks be used for?**

Aimtek's proprietary material library, in combination with nuanced design, provide industry-leading durability with minimal cleaning or maintenance for a variety of applications. For typical thermal spray applications, Aimtek's Plasma silicone masks commonly last for 8-10 cycles, though some customers report 50+ uses and counting. Certain complex, time-intensive, or aggressive applications can find savings through process efficiency with even a single use when compared to traditional tape masking techniques.

- **Are molds expensive?**

Rapid prototyping technologies and in-house manufacturing capabilities give Aimtek a competitive edge in the development of custom masking solutions. Aimtek's goal is to help customers reach cost-savings through a sustained process improvement, and up-front costs are kept to a minimum.

- **How high of a temperature can the masks hold up to?**

Aimtek's silicone materials for thermal spray applications have strong performance up to and even beyond 250°C. Cycle time, active cooling configuration, and material deposition rate are a few of the many factors beyond peak temperature that affect the resilience of any mask against high-heat processes.

- **What technical data is needed to quote a new project?**

It is easiest for Aimtek to provide an accurate quote based on a clean 3D model of the part to be masked, although a dimensional 2D drawing can also suffice. Parasolid or STEP files work best to transfer data. Additionally, a description of the process parameters (type of process, peak temperatures, cycle durations etc.) and the designated coat/no-coat regions prescribed for the part are needed as basic requirements. Whatever information can be provided to estimate the size and shape of a proposed masking solution helps the process – for simple applications, a few keystone dimensions and basic parameters can be enough.

Once a new project design begins, additional information beyond that provided for quoting may be required for an accurate solution to be developed.

- **What materials are compatible with silicone masking?**

Fully-hardened silicone is a stable material, and does not react or form oxides with common thermal spray substrate materials. While Aimtek's silicone-based materials are dry-touch and do not leave residue under normal use, some paint applications may not allow for contact with silicone. In these cases, or where otherwise beneficial, Aimtek can also provide high performance polyurethane-based material options. Aimtek is ready to meet unique material requirements as part of the custom-design process.

- **Does the silicone meet any regulatory approvals?**

Fully-hardened silicone is not considered a hazardous chemical by the manufacturer. Material characteristics and safety or compliance information is available upon request.