



Save Time and Money with the Right Materials and Methods

Flame Spray coatings, sometimes referred to as combustion coatings, are a very basic form of thermal spray coating. A gun is simply fed with a wire, powder, or solid rod feedstock. The material is melted through combustion and the particles are fired from the gun towards the target surface. The semi-molten particles impact the surface forming a series of splats which overlap and combine to form a continuous coating.

Common applications for flame spray coatings are basic wear coatings and corrosion resistant coatings. Ceramic rod spray can also be adapted for this style of coating as a basic thermal barrier coating.

The Need for Masking

In many cases items receiving flame spray coatings have specific non-target areas that are not to come into contact with the coating spray. These areas must be masked with a durable masking material that will stand up to the abrasion and heat of both the surface preparation (grit blasting) and thermal spray processes.

Advantages of Engineered Masking Solutions from Green Belting

Green Belting Industries Masking Materials are engineered to meet the demands of a wide range of thermal spray coating processes, including flame spray. They offer superior performance because of the following attributes:

- **Abrasion Resistance** – The types of coatings and thicknesses used are engineered to resist the abrasive forces of both the grit blast and flame spray coating processes. Green Belting Industries products can be applied once for both grit blasting and flame spray coatings.
- **Strong Adhesion of Tapes** – Masking tapes exhibit high adhesion to metal and to themselves (to prevent flagging).
- **Resistance to Heat Transfer** – From the substrate to the coatings and adhesives, Green Belting Industries masking materials are engineered to resist the extreme temperatures of thermal spray coating processes including flame spray.
- **Highly Conformable** – Our tapes and compounds are easy to work with and conform well to surface contours in more complex masking applications.
- **Clean Release** – Despite high adhesion the tapes are designed to remove cleanly with no adhesive residue.

Opportunities for Time and Cost Savings

The costs associated with masking for flame spray coating include both the time and materials used during the masking process, as well as possible added time for clean-up afterwards if inferior products or methods are used.

For example, clean-up or repair may be required if the masking material has failed during the spray-coating process, or if residue has been left by an inferior masking material with a low-grade adhesive.

Further costs arise if parts must be masked twice, once for grit blasting (surface preparation) and again prior to receiving the spray coating. Use of high-quality Green Belting Industries thermal spray masking materials can eliminate all of these added costs.



Green Belting Industries tapes, fabrics, and compounds can often be applied once for both grit and spray coating.



Masking

Pre-Spray

Post Grit Blast

Post Flame Spray

Post Spray (Tape Removed)

Improving Time and Cost Efficiencies with Green Belting Industries Engineered Masking Solution

Flame spray masking can be very time consuming and costly. Green Belting Industries recommends the following products and strategies to improve masking efficiency while saving time and money:

- **Eliminate Unnecessary Masking Layers** – When using weaker masking tapes, more layers (three or four) are generally used to ensure the tape provides a suitable barrier to protect the part being sprayed. Stronger Green Belting Industries silicone glass tapes (plasma spray masking tapes) can be applied with just one or two layers. This allows for faster masking and less tapes consumption. The 170 series tapes can reduce labour and processing times while reducing tape consumption considerably.
- **Use Die Cuts to Save Time and Improve Safety** – For repetitive masking jobs, Green Belting Industries offers both Pre-Cut lengths and widths and Die-Cut to allow for faster masking and better accuracy. Less cutting during tape application results in reduced risk of injury such as cuts and repetitive strain injury.
- **Reduce or Eliminate Clean-Up Time** – Unlike other tapes, thermal spray masking tapes leave no adhesive residue which eliminates the need for additional clean up efforts, again producing a time and cost savings.
- **Eliminate Repetitive Masking** – Green Belting Industries masking products are suited to endure both grit blast and flame spray coatings with one application. Therefore, no additional masking is needed (mask only once). The result is a more efficient masking solution, that saves valuable time, money and increases the efficiency of your operation.

Product Recommendations for Flame Spray

Tapes

- Any Green Belting Industries Plasma Masking Tape can be used for flame spray applications, including **170-10S YL**, **170-10S Green**, or **170-10S Red**.
- The best option is **170-10S Green**. This masking tape will survive intense abrasion associated with grit blast, and will also survive the heat and abrasion of flame spray coating. The tape will leave perfect coating lines and will remove quickly and cleanly, leaving no residue behind.

Compounds

- Masking compounds such as **HVMC (High Velocity Masking Compound)** are ideal to create reusable masking moulds, plugs, caps and sleeves.

Fabrics

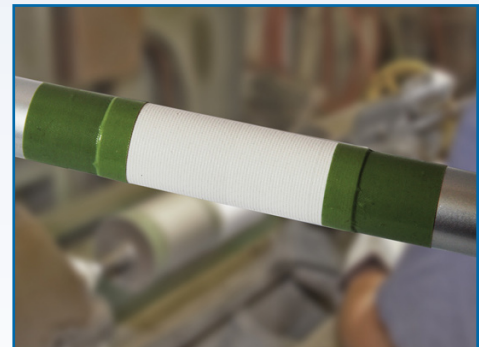
- For secondary masking, **SW-35** thermal spray masking blanket (silicone coated glass fabric) can be deployed to protect against overspray. This material is reusable for many cycles.



170-10S Green Masking Tape



170-10S Red and HVMC –
High Velocity Masking Compound (blue)



170-10S Green Masking Tape with SW-35 Silicone
Coated Fiberglass Fabric (white)

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As an ISO 9001 Quality Registered Company, our ongoing procedure for quality assurance starts with thorough inspection of all raw materials to ensure compliance with our required specifications. All manufacturing processes are closely monitored, and finished product is tested against our high internal standards and customer specifications. This assures that we always deliver consistently high quality products.

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