PTFE GROUP OF COMPANIES
green belting industries
greenbelt industries
mapelli
biscor

Masking for Flame Spray

More than just tape

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.

The advantage of Engineered Masking Solutions from PTFE Group

PTFE Group 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:

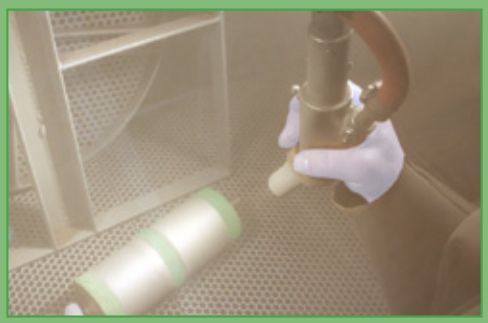
- **Heat Resistance** – From the substrate to the coatings and adhesives, PTFE Group masking materials are engineered to resist the extreme temperatures of thermal spray coating processes including flame spray.
- **Abrasion Resistance** – The types of coatings and thicknesses used are engineered to resist the abrasive forces of both the grit blast and flame spray coating processes. PTFE Group products can be applied once for both grit blasting and flame spray coatings.
- **Conformability** – Our tapes and compounds are easy to work with and conform well to surface contours in more complex masking applications.
- **Adhesion** – masking tapes exhibit high adhesion to metal and to themselves (to prevent flagging).
- **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.

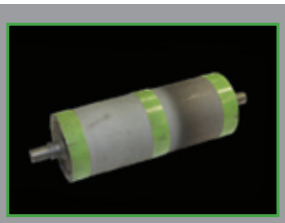
For example, clean-up or repair may be required if the masking material has failed during the spray-coating process, or if residue has been left by an inferior masking material with a low-grade adhesive.

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 PTFE Group Thermal Spray Masking Materials can eliminate all of these added costs.

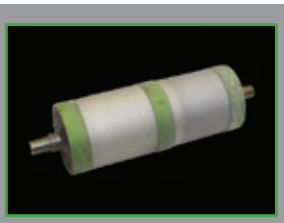


PTFE Group tapes, fabrics, and compounds can often be applied once for both grit blast and spray coating.

Masking

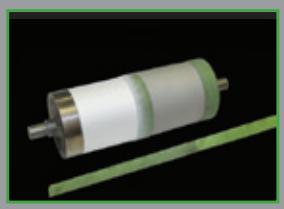


Pre-Spray



Post Grit Blast

Post Flame Spray



Post Spray – Tape Removed

Improving Time and Cost Efficiencies with PTFE Group Engineered Masking Solutions

Flame spray masking can be very time consuming and costly. PTFE Group 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 PTFE Group silicone glass tapes (plasma spray masking tapes) can be applied with just one or two layers. This allows for faster masking and less tape consumption. The GBI 170 series tapes can reduce labor and processing times while reducing tape consumption considerably.
- **Use Die Cuts to Save Time and Improve Safety** – For repetitive masking jobs, PTFE 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, GBI 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** – PTFE Group 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 PTFE Group Plasma Spray Masking Tape can be used for flame spray applications, including 170-10s YL, 170-10s Green, or 170-10s Red.
- The best option is GBI 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.

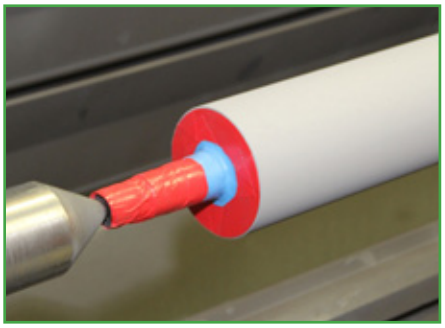
Compounds

- Masking compounds such as GBI APMC (*All Purpose Masking Compound)* and GBI HVMC (*High Velocity Masking Compound*) are ideal to create re-usable masking moulds, plugs, caps, and sleeves.

Fabrics

- For secondary masking, GBI S/W 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)

PTFE GROUP OF COMPANIES

Canada

green belting industries

381 Ambassador Drive
Mississauga, ON L5T 2J3
Canada

T: 905-564-6712
F: 905-564-6709
E: custserv@greenbelting.com

www.greenbelting.com

Italy

mapelli

20060 Pozzo d'Adda (Mi)
Via Meucci , 7
Italy

T: +39.02.90967258
F: +39.02.90967236
E: info@mapelli-ptfe.com

www.mapelli-ptfe.com

UK

biscor

Unit 8, Kingsmark Freeway
Bradford BD12 7HW
United Kingdom

T: +44(0) 1274 694684
F: +44(0) 1274 694685
E: info@biscor.com

www.biscor.com

USA

greenbelt industries

45 Comet Street
Buffalo, New York 14216
USA

T: 800-668-1114
F: 905-564-6709
E: custserv@greenbelting.com

www.greenbelting.com