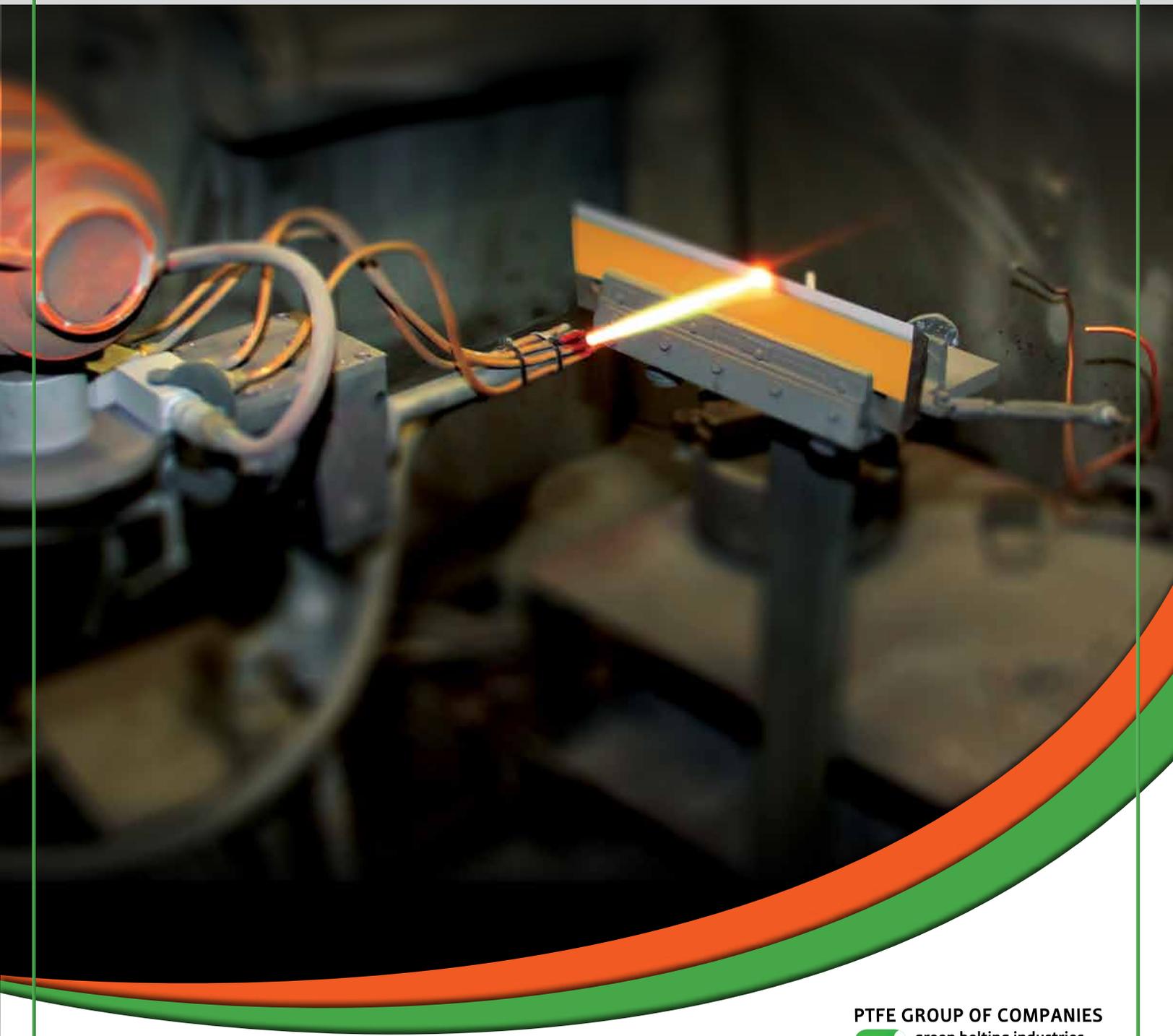


Thermal Spray Masking

Tapes | Fabrics | Compounds

AVIATION FLAME SPRAY MINING GRIT BLAST SWIMMING POOLS ARC SPRAY LANDING GEAR
LIQUID-FUELLED HVOF LAND-BASED GAS TURBINES GAS FUELLED HVOF RENEWABLE ENERGY
RESOURCE EXTRACTION JOB SHOPS PROSTHETIC JOINTS PLASMA SPRAY WATER TURBINES



PTFE GROUP OF COMPANIES



High Tolerances for Extreme Environments

When masking high-value parts in preparation for the intense forces of thermal spray coating, you want to be sure that you are using materials that are designed and proven to stand up to the test. Finding out later that the tape surface was compromised, or the adhesive didn't hold will only leave you with costly and time consuming repair, or worse, scrap. As a proven and trusted leader in the innovation and production of high-quality thermal spray masking materials, PTFE Group provides masking materials that are engineered, tested*, and proven in spray shops around the world. Our experienced field reps and product specialists are committed to helping you find the best masking product for your application.

Common masking applications



Plasma Spray - Extremely high temperature and high abrasion call for masking materials that must withstand these forces during expected 'dwell time' parameters. Masking materials, including tapes and compounds must remain in place, resist burning and edge lifting, and prevent unwanted overspray and/or damage to the part being sprayed. All PTFE Group Plasma Masking Materials are precision made with the highest quality silicone, fiberglass, adhesives and compounds to ensure optimum performance in this harsh setting. All are easy to work with, offer high flexibility and conformability, and can be removed cleanly and easily following the spray process, leaving no adhesive residue.

Recommended materials: 170-10S YL & 20S YL, 170-10S Green, 170-10S Red, 179-20S or 25S, S/W 35 Fabric, and HVMC.



Gas Fuelled-HVOF - The high particle velocity of GF-HVOF results in extremely high abrasion and a rapid transfer of heat through the masking materials. In order to mask effectively against GF-HVOF, masking materials, including tapes, must be strong enough to withstand both the high abrasiveness and high heat. PTFE Group HVOF Tapes and HVMC (High Velocity Masking Compound) are proven performers that hold up exceptionally well against the HVOF spray while offering high conformability, and clean, residue-free removal.

Recommended materials: HVMT Orange Tape, and HVMC.



Liquid Fuelled HVOF - The extreme abrasion and heat generated by LF-HVOF coatings often limit masking options to metal masking fixtures or tooling. However, effective masking strategies can include combinations of metallic masking for highest exposure areas, and tapes, fabrics, and compounds as secondary and supplementary masking. Used in this way, PTFE Group Tapes and HVMC Compound can help to reduce or eliminate bridging and edge chipping, and provide effective coverage in secondary masking areas.

Recommended materials: HVMT Orange Tape and HVMC Compound as secondary masking for precision masking for challenging applications, in conjunction with metal masking profiles.

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Arc Spray - The primary challenge associated with the Arc Spray coating process is the wide spray plume that exits the gun. This results in the necessity of primary masking, close to the target zone, and secondary masking to protect large non-target areas from overspray and costly clean-up or re-work. While arc spray is not as abrasive as other spray processes, it still requires proper masking to ensure protection of the part and non-target surfaces.

Recommended materials: 170-10S YL & 20S YL, 170-10S Green, 179-20S or 25S, 190-10S, S/W 35 Fabric, and HVMC.

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Flame Spray - Flame Spray coatings, (combustion coatings) are a very basic form of thermal spray coating. Because of the relatively low heat and abrasion, coatings are often applied with hand-held spray guns in an open shop setting rather than within a spray booth. Many PTFE Group masking materials are well-suited from this process. Masking strategies should contemplate materials that are capable of withstanding both the grit blast and flame spray coating process in order to save time and reduce cost.

Recommended materials: 170-10S YL & 20S YL, 170-10S Green, 170-10S Red, 179-20S or 25S, S/W 35 Fabric, and HVMC.



Grit Blast - To effectively prepare the component for the thermal spray coating, sharp, angular media, such as aluminum oxide, is blasted at high pressure towards a target surface to remove unwanted coatings and to apply a desired (roughened) surface texture. PTFE Group masking materials, such as 170-10s Green are well suited to endure both the grit blast and spray coating processes, thus saving significant time and cost.

Depending on the size of grit and coating method being used, recommended materials include: HVMT Orange, 170-10S YL & 20SYL, 170-10S Green, 170-10S Red, 179-20S or 25S, S/W 35 Fabric, and HVMC.

*Ongoing laboratory testing ensures that PTFE Group Thermal Spray Masking materials offer industry leading performance in measures of strength, resistance to extreme temperatures, resistance to abrasion, and adhesive performance (strength of adhesive on metal, face-to-back adhesion, and clean removal).

Engineered Masking Solutions - *More than Just Tape*

Product	Maximum Width		Nominal Thickness		Adhesion to Steel		Adhesion to Self	
	(in)	(mm)	(mil)	(mm)	(oz/in, w)	(N/cm, w)	(oz/in, w)	(N/cm, w)

Fiberglass Tapes

160-5S HT	48	1219	7.5	0.19	30	3.3	53	5.8
162-7S	36	914	7	0.18	35	3.8	30+	3.8+
162-7S HT	36	914	8	0.20	30	3.3	30+	3.8+
162-12S	36	914	11.5	0.29	30	3.3	30+	3.8+

Silicone Coated Fiberglass Tapes

170-10S YL	48	1219	11	0.28	40	4.4	30	3.3
170-10S Green	48	1219	10.5	0.27	40	4.4	30	3.3
170-10S Red	48	1219	11	0.28	40	4.4	30	3.3
HVMT Orange	48	1219	20	0.51	35	3.8	30	3.3

Multi-Layer Tapes

170-20S YL	18	457	20.5	0.52	30	3.3	25	2.7
170-20S Green	18	457	20.5	0.52	40	4.4	30	3.3
179-20S	13	330	20.5	0.52	30	3.3	20	2.2
179-25S	13	330	25	0.64	25	2.7	20	2.2

Aluminum Foil Tapes

190-7S	48	1219	7	0.18	38	4.1	30	3.3
190-10S	48	1219	10	0.25	40	4.4	40	4.4

Masking Fabric

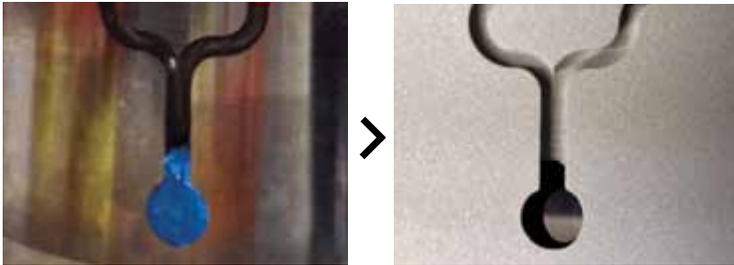
Product	Max Width		Nom. Thickness		Nom. Wt.		Break Strength		Max Op. Temp	
	(in)	(mm)	(mil)	(mm)	(oz/yd ²)	(g/m ²)	(lb/in, w)	(N/cm, w)	(°F)	(°C)
S/W 35	38	965	35	0.89	33.4	1131	800	1401	480	249

Masking Compound

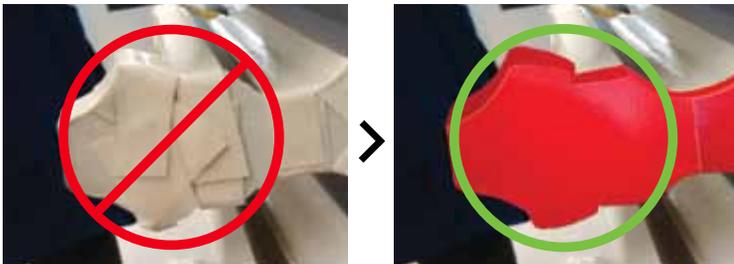
Product	Shore Hardness	Tensile Strength		Elongation	Shrinkage	Max Op. Temp	
		(psi)	(kPa)			(%)	(%)
HVMC	40	500	3448	350	<0.1	500	260

Product data is subject to change. Contact your representative for more details.

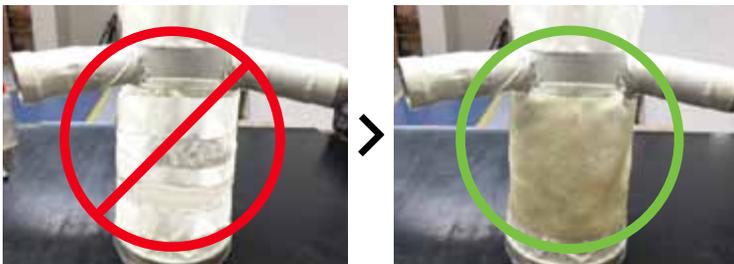
Improve efficiency with innovative masking solutions



HVMC is highly effective for filling small holes, details, and for creating reusable plugs



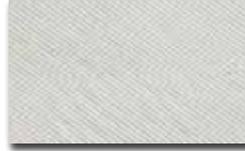
Pre-Cut Profiles and Engineered Nested Kits save significant time when masking repetitive projects that have multiple masking surfaces and profiles.



An effective and reusable 'masking blanket' for secondary masking zones, S/W 35 Fabric covers large surface areas, significantly reducing tape consumption and cost.



HVMT Orange - Engineered for Gas Fuelled HVOF, this tape is well-suited for some of the most demanding thermal spray applications. Highly conformable for precision masking, it withstands extreme heat and abrasion and releases quickly and cleanly after use.



160 Fiberglass - Constructed with tightly woven high-tensile uncoated glass cloth and silicone adhesive, this tape is ideal for secondary masking. It is highly conformable and leaves no adhesive residue upon removal.



162 Fiberglass - Ideal as an under wrap in demanding coating applications, this high temperature fiberglass cloth tape has silicone adhesive on both sides. The tape removes cleanly after use and leaves no adhesive residue.



170-10S & 20S YL - Our standard thermal spray masking tape withstands grit blast and thermal spray, and releases cleanly from metal surfaces. **170-20S YL** offers double-layered protection for added strength and resilience.



170-10S Red - Well suited for plasma spray coating and applications involving higher temperatures, this tape resists burning and scorching while leaving clean coating lines and no adhesive residue.



170-10s & 20S Green - In most cases, just a single layer of 170-10S Green will withstand both the grit-blast and spray coating processes. For more demanding jobs, **170-20S Green** provides an extra layer of protection.



179 Multi-Layer - This high temperature, abrasion resistant multi-ply tape is made with a silicone/glass layer laminated to a heavy gauge aluminium foil. The aluminum layer enhances conformability and produces clean edge lines.



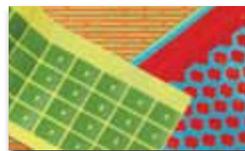
190 Aluminum - Made with aluminum foil and fiberglass cloth laminate, this specialized tape offers dual masking protection. It is highly conformable, releases cleanly from metal surfaces and leaves clean edge lines.



S/W 35 Fabric - Available in widths of 38", this reusable silicone coated glass fabric masking blanket is ideal for masking larger surfaces as a secondary masking material.



High Velocity Masking Compound (HVMC) Highly effective for masking difficult openings, crevices and contours, HVMC can be used to form reusable masking plugs, caps, and moulds. HVMC stands up to all forms of thermal spray and surface treatment.



Pre-Cut Profiles - Whenever there is a need for repeat masking of a specific shape, precision custom cut profiles save considerable time. Specific templates are generated from customer supplied CAD drawings.



Engineered Nested Kits - For complex and repetitive masking of an identical set of parts, custom kits of precision pre-cut shapes save considerable time and cost. Multi-profile templates are generated from customer supplied specifications or CAD drawings.

The PTFE Group Advantage

At PTFE Group, our approach to producing quality performance materials contemplates the vast range of unique applications and possibilities, from routine to complex, and from harsh to extreme. Our line of Fluorofab®, Silicone, and Aramid fabrics meets a diverse range of barrier, release, belting, gasket, and other specialized demands. Customers experience a dramatic increase in performance and process efficiency while reducing turnaround time. Our ever-increasing Knowledge Base of resources offers tips, techniques, and examples to provide support to our customers and end users.



Strength and Performance - Fabrics, Belts, Tapes, and more...

PTFE Group offers the highest quality PTFE and Silicone coated fabrics, tapes, belts, pre-cuts, and nested kits for a multitude of applications ranging from baking sheets to thermal spray masking for jet engine turbine blades.

Key performance attributes:

- Resistance to extreme temperatures and abrasion
- Non-stick surfaces resist adhesion and chemical bonding
- Excellent strength and dimensional stability
- Engineered adhesives provide exceptional grip and easy, clean release (leave no residue)
- Excellent heat transfer and dielectric properties (depending on material)
- Food-contact approved (chemically inert, nontoxic).

Research and Testing

Our goal is to provide the fabric, tape, or belt you need, when you need it. Our R & D teams are constantly testing the performance of existing products and researching new and different substrates, coating resins and manufacturing technologies in response to new and emerging applications. We are always striving to get better at what we do. Whether it's helping you find a resolution to a tough technical problem or simply getting your order out on time, PTFE Group is committed to providing you the most cost-effective, best performing and widest choice of engineered performance materials in the marketplace.



Manufacturing Excellence

As an ISO 9001 Quality Registered company, PTFE Group strives for continuous improvement and is committed to providing products and service of the highest quality. We draw from over 50 years of manufacturing excellence to design and build our own specialized equipment that delivers the highest quality engineered fabrics, tapes, & belts to the marketplace. This emphasis on quality and performance enables our customers to benefit from enhanced production efficiencies, higher output quality, and time and cost savings.

Friendly Expert Service

We know that we can only be as good as our people so PTFE Group thrives on individual initiative, teamwork, and superior service to our customers. Our knowledgeable Customer Service teams regularly receive hands-on, cross-departmental training which includes assembling product in one of the fabrication facilities. This approach has made our associates among the most industry-savvy in the business. With Customer Service teams based in all four of our operating countries (Canada, USA, Italy, and the UK), beginning with your initial contact PTFE Group is with you every step of the way.



Efficient Global Distribution

With four plant and office locations in Canada, USA, Italy, and the UK, PTFE Group customers benefit from the quick and efficient global distribution. Bringing the resources of these four locations together translates to distinct advantages for our customers, including manufacturing and fabricating efficiencies and improved inventory management, delivery, and customer service. All four facilities are within major population centers, assuring that the majority of our customers will experience product delivery within three to four days from the time of shipping.

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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.