



**AEROVAC**  
COMPOSITES ONE

Product Portfolio for  
**Process Materials**

Aerospace and Industrial Markets

**COMPOSITE  
MATERIALS**





Innovation is at the heart of everything we do. It always begins with our customers and is driven by a desire to intimately understand their needs, providing novel technologies and services that challenge the status quo. Our extensive know-how is focused on partnering with customers and providing real advantages over the long term.



## Asking More from Chemistry

With manufacturing and distribution sites across the world, ours is very much a global approach to creating and delivering the right solution. Yet it's our local links that enable us to do so. Throughout the years, we've fostered strong relationships in every territory we operate in, meaning our customers enjoy a highly skilled, responsive and reliable service from people they know and trust. We think of it as global knowledge, locally served.

This unique approach has attracted some of the world's biggest names to our portfolio of clients, including most major aerospace, defense and wind turbine Original Equipment Manufacturers (OEMs), numerous constructors of high performance super cars and Formula One teams, and a myriad of other pioneering engineering businesses. All of which benefit from rapid, high quality service and technical support.

## Process Materials

Operating from facilities in Europe, North America and China, we develop, manufacture and supply innovative process materials and services to the composites industry, including vacuum bagging consumables, infusion materials, customized kitting and reusable vacuum systems. The processes in which these materials are used include prepreg processing, resin infusion, hand layup, filament winding, compression molding of thermoplastic composites and glass lamination.

Our manufacturing facility is engaged in the co-extrusion and transformation of multi-layered plastic film, with the capability and technology to manufacture extruded and co-extruded plastic films up to 18 layers thick using blown and cast techniques.

Alongside our technical expertise, we offer a truly customer-first approach. We listen. We advise. Then we respond by delivering innovative products custom formulated to meet our customers' requirements. It's what sets us apart from our competitors.



# Composite Materials Processing Techniques

## Prepreg Processing

The prepreg is laid into the tool and several consumable products are placed on top, usually a peel ply, release film, breather fabric and vacuum bagging film (the order of these consumables is shown in the diagram below). Vacuum is applied for part consolidation. When producing a thick laminate requiring several layers of prepreg, debulk operations are required.

Once the tool is closed (sealed by a vacuum bag) and all the air has been evacuated from the laminate, it can be placed into an autoclave or oven if heat or pressure is required for cure.

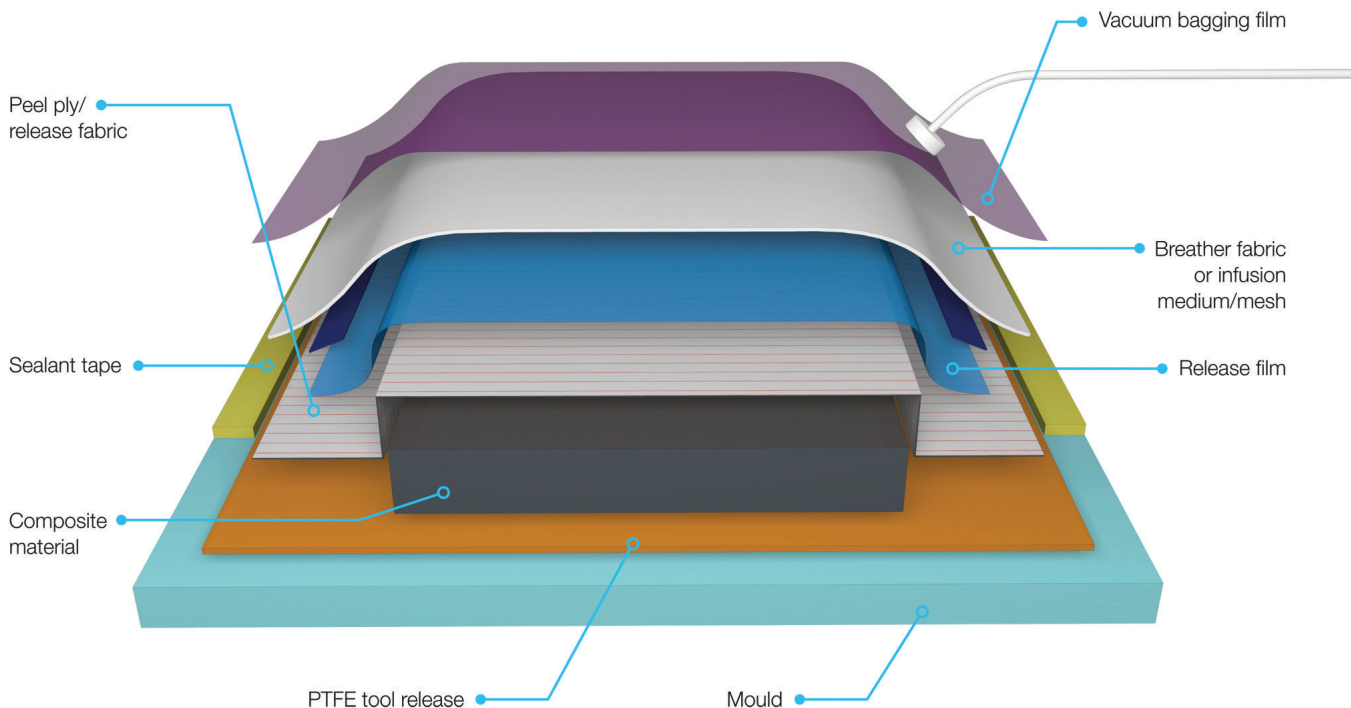
## Resin Infusion

The process of impregnation by infusion is a manufacturing technique used in open tool composite production. The reinforcement materials are laid up dry and several consumable products are placed on top, usually a peel ply, release film, flow media and vacuum bagging film. The order of these consumables is shown in the diagram at the bottom of the page, and vacuum is applied for part consolidation.

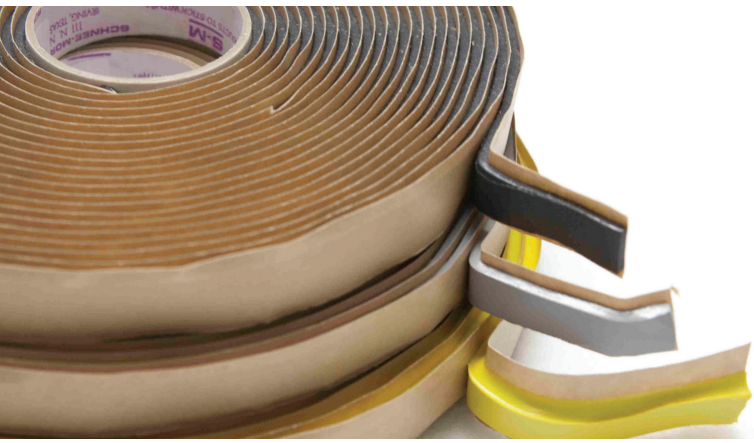
Once the tool is closed (sealed by a vacuum bag) and all the air has been evacuated from the dry lay-up, the resin is transferred through the bag into the laminate, distributed by a channel or lining/mesh. The process is always carried out under pressure, where the bag pressure is less than the outside atmospheric pressure.

The resin, allowed to breathe in an open vessel, is fed through the vacuum bag (usually using plastic tubing) and distributed over the entire surface of the reinforcement material using a combination of porous channels and a distribution medium/mesh.

## Typical Vacuum Lay-up







## Vacuum Bagging Consumables

### Available as roll stock or engineered kits

We offer a comprehensive range of vacuum bagging consumables, available as roll stock or as engineered kits. Different customer set up will make one of these two options the best fit to their manufacturing needs.

To find out more about the range of kits available, please refer to our Kitting brochure.

We also offer reusable vacuum bags (RVBs) made from rubber and boosting the industry's most advanced sealing systems. To find out more about this range of product, please refer to our Tooling brochure.



# Vacuum Bagging Film

Aerovac offers a comprehensive range of in-house manufactured products, as well as a research and development capability which can be focused on unique customer solutions, whether that's product features such as humidity resistance or tailored formatting to reduce labor costs.

Product Reference	Temperature °F (°C)	Description
<b>VACFILM™ 300R</b> <sup>2</sup>	320 (160)	Red co-extruded film developed for use with prepreg during fabrication of hollow structures up to 320°F (160°C).
<b>VACFILM™ 430</b> <sup>2</sup>	248 (120)	Clear high elongation film ideal for de-bulking applications and oven curing up to 248°F (120°C).
<b>VACFILM™ 400Y</b> <sup>3</sup>	302 (150)	Yellow high strength, high elongation film for medium temperature applications up to 302°F (150°C), such as the production of large wind energy and marine components.
<b>VACFILM™ 465B</b> <sup>3</sup>	329 (165)	Blue tough co-extruded film ideal for use in production of large wind energy components with medium temperature epoxy prepregs up to 329°F (165°C).
<b>VACFILM™ 200G</b> <sup>2</sup>	248 (120)	Green co-extruded film ideal for wet lay up and infusion processes up to 248°F (120°C) such as marine and wind energy, compatible with most resin systems.
<b>VB-3</b> <sup>2</sup>	600 (315)	Beige cast PTFE film with high elongation at elevated temperatures, up to 600°F (315°C) and a chemical etch on one side to ensure good adhesion.
<b>VACFILM™ 800G</b> <sup>3</sup>	400 (204)	Green multi-layer extruded film ideal for high temperature curing of aerospace composites, including some BMIs, up to 400°F (204°C).
<b>VACFILM™ 450V</b> <sup>3</sup>	338 (170)	Violet, tough but flexible co-extruded film ideal for use with medium temperature epoxy and phenolic prepregs up to 338°F (170°C).
<b>STRETCH-VAC™ 350</b> <sup>3</sup>	350 (177)	Clear co-polymer film ideal for use with complex tooling geometry up to 350°F (177°C).
<b>STRETCH-VAC™ 3000</b> <sup>3</sup>	400 (204)	Pink multi-layer film ideal for high temperature autoclave cures of aerospace composites, including some BMIs, up to 400°F (204°C).
<b>STRETCH-VAC™ 2000</b> <sup>1</sup>	400 (204)	Pink multi-layer film ideal for high temperature autoclave cures of aerospace composites, up to 400°F (204°C).
<b>STRETCH-VAC™ 6000</b> <sup>2</sup>	419 (215)	Heat stabilized film with high elongation, suitable for high temperature (up to 419°F/215°C) autoclave curing of aerospace composites, including BMIs and for applications where softness is required.
<b>VAC-PAK® HS 800</b> <sup>3</sup>	375 (191)	Gold, co-extruded PA film which is ideal for high temperature/pressure applications where softness and workability are essential, suitable for use up to 375°F (191°C).
<b>VAC-PAK® HS 8171 6/66</b> <sup>3</sup>	400 (204)	Light blue-green, PA co-polymer film which remains pliable after extended cure cycles. Ideal for advanced composite fabrication and other high temperature/pressure cures up to 400°F (204°C).
<b>VAC-PAK® HS8171</b> <sup>3</sup>	400 (204)	Clear green, modified nylon film, tough with high elongation. Approved on various aerospace specifications for use up to 400°F (204°C).
<b>QUICKDRAW® HS8171</b> <sup>3</sup>	400 (204)	Clear, green film embossed to allow air evacuation in compaction or de-bulking applications up to 400°F (204°C), approved on various aerospace specifications.
<b>VAC-PAK® HS6262</b> <sup>3</sup>	450 (232)	Blue, modified nylon film with excellent elongation and heat ageing properties for use up to 450°F (232°C), approved on various aerospace specifications.
<b>VAC-PAK® HT 620</b> <sup>1</sup>	620 (326)	Olive colored, high elongation film produced from PTFE resin with a chemically conditioned side to ensure good adhesion for use up to 620°F (326°C).
<b>VAC-PAK® UHT 750 3</b>	800 (426)	Amber polyimide film developed for use with high temperature thermoplastic matrix materials up to 800°F (426°C).
<b>POLYIFILM</b> <sup>2</sup>	725 (400)	Amber polyimide film developed for use with high temperature thermoplastic matrix materials up to 752°F (400°C).
<b>STRETCH-VAC™ PRO-RAP</b> <sup>1</sup>	250 (121)	Co-polymer low temperature film which can be used for cures up to 250°F (121°C) whilst remaining soft and pliable. Engineered for use with most commonly used resin systems including phenolics.

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe



## Product Focus: SV6000

This heat stabilized vacuum bagging film is ideally suited to aerospace applications. It has a high elongation and is suitable for high temperature autoclave curing up to 215°C/419°F. It is compatible with epoxies and BMIs and is recommended for bagging applications where a higher softness is required.

## Breather Fabric

A unique offering of non-woven breather fabrics ranging from 85g/m2 lightweight material to specially formulated low cost, high performance products. Breather fabric can be supplied in standard roll formats, slit widths, cut shapes or 3D stitched formats tailored to meet your requirements. Various weights are available.

Product Reference	Weight oz/ yd <sup>2</sup> (g/m <sup>2</sup> )	Description
<b>AB80</b> <sup>2</sup>	2.7 (90)	Lightweight, non-woven polyester breather felt which is mechanically bonded by needling for use up to 400°F (204°C).
<b>AB10</b> <sup>2</sup>	9.7 (330)	Heavyweight non-woven polyester breather felt ideal for use in oven or high pressure autoclave environments up to 400°F (204°C).
<b>AB100</b> <sup>2</sup>	4.4 (150)	Medium weight polyester breather with good all round stretch and drapeability making it ideal for use on components with complex curvatures up to 401°F (204°C).
<b>AB20</b> <sup>2</sup>	20 (680)	Heavyweight polyester breather ideal for use in oven or high pressure autoclave environments up to 400°F (204°C).
<b>AB250HT</b> <sup>2</sup>	7.4 (250)	Ultra heavyweight polyester breather ideal for use in oven or high pressure autoclave environments up to 400°F (204°C).
<b>A3000-4 &amp; -4FR</b> <sup>3</sup>	4 (136)	Stretchable, non-woven polyester breather felt with drapeability enabling it to conform closely to the contours of your part, which works up to 400°F (204°C). A highly efficient breather due to multi-directional stretch combined with low density lightweight construction.
<b>A3000-7 &amp; -7FR</b> <sup>3</sup>	7 (237)	Stretchable, non-woven polyester breather felt with good multi-directional stretch combined with low density lightweight construction. Works up to 400°F (204°C).
<b>RC-3000-10A &amp; -10AFR</b> <sup>3</sup>	10 (339)	Non-woven polyester breather felt capable of operating at temperatures up to 400°F (204°C) and pressures up to 100PSI (6.9bar).
	10 (339)	Heavyweight polyester breather felt ideal for use in oven or high pressure autoclave environments up to 400°F (204°C).
<b>RC-3000-20 &amp; -20FR</b> <sup>3</sup>	20 (680)	Heavyweight polyester breather felt ideal for oven or high pressure autoclave cures up to 400°F (204°C) and is approved on various aerospace specifications.
<b>AB40N</b> <sup>2</sup>	11.8 (400)	Heavyweight nylon 66 breather felt which is extremely resistant to "locking off". Ideal for high temperature 450°F (232°C) and pressure cures, where other fiber types are less resistant to compression.
<b>AB10HA</b> <sup>2</sup>	10 (339)	Heavyweight polyester breather felt ideal for use in oven or high pressure autoclave environments up to 400°F (204°C).
<b>RC-3000-NB</b> <sup>1</sup>	Range available	Heavyweight nylon 66 breather felt which is extremely resistant to "locking off". Ideal for high temperature 450°F (232°C) and pressure cures, where other fiber types are less resistant to compression.
<b>RC-3500HT</b> <sup>3</sup>	18 (610)	Non-woven fiberglass breather felt capable of operating at temperatures above 1000°F (538°C) without taking a heat set, and pressures over 200PSI/13.8bar. Engineered for use on polyimide curing, thermoplastic consolidations and very high temperature vacuum bagging applications.

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe

## Product Focus: AB40N

This Nylon breather fabric was developed for high temperature and high pressure autoclave cures and as such is ideally suited to aerospace and thermoplastic applications. It offers the benefit of maintaining high airflow performance and is extremely resistant to "locking off" under high pressure. This product has numerous OEM approvals.

## Combination Products

Custom-made product combinations can be manufactured to suit almost any need. They offer significant time reductions in both consumable lay-up and post-cure consumable extraction, whilst concurrently reducing material inventory and simplifying the ordering process.

Product Reference	Temperature °F (°C)	Description
<b>Infuply</b> <sup>3</sup>	248 (120)	Perforated release film combined with knitted infusion mesh which aids resin transfer and strips easily from the laminate, working up to 248°F (120°C). Ideal for manufacture of large component parts delivering significant labor savings.
<b>Aeroply HT</b> <sup>2</sup>	356 (180)	Peel ply, release film and breather fabric bonded together in a single product to reduce labor time, working up to 356°F (180°C). Ideal for manufacture of large component parts delivering significant labor savings.
<b>VMS3</b> <sup>3</sup>	176/284 (80/140)	Innovative microporous vacuum line, allow optimal vacuum extraction not allowing resin flow into vacuum lines, allows better freedom in deigning infusion networks, handling convergent flow, also available in high temp version.
<b>Aeroply LT</b> <sup>2</sup>	248 (120)	Peel ply, release film and breather fabric bonded together in a single product to reduce labor time, working up to 248°F (120°C). Ideal for manufacture of large component parts delivering significant labor savings.
<b>VMS160A</b> <sup>2</sup>	176 (80)	Micro-porous textile infusion break area. Selective barrier which allows air to evacuate, without drawing out resin. VMS160A is formed from a layer of polyester microfibers which react to all fluids and therefore block any resin. Works up to 176°F (80°C).

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### Product Focus: VAC-PLY™ VMS3

VAC-PLY™ VMS3 is a next-generation, multi-layer, microporous vacuum channel for resin infusion. It was specifically designed to maximize air removal during resin infusion processes, thus optimizing impregnation and avoiding dry spots. It addresses the manufacturing challenges our customers face and simplifies the infusion process, making it ideal for large structures' infusion, such as boat hulls or wind turbine blades, where maintaining vacuum over long distances is critical.

VAC-PLY™ VMS3 offers clear benefits to users including reduced witness mark on the laminate surface decreasing costly re-work, improved linear adhesive bond line reducing potential for resin penetration and thinner overall construction allowing for easier placement.





# Peel Ply

Light to heavyweight woven fabrics available in both nylon and polyester. Some are also available with adhesive backing in order to simplify the consumable application process. Peel ply is available in standard formats, slit widths and cut to shape formats.

Product Reference	Weight oz/ yd <sup>2</sup> (g/m <sup>2</sup> )	Description
<b>A100PS</b> <sup>3</sup>	2.3 (80)	White, medium weight, nylon peel ply with red pinstripe, which strips cleanly and quickly from most commercial resin systems, working up to 400°F (204°C).
<b>A100</b> <sup>3</sup>	2.3 (80)	White, medium weight, nylon peel ply, which strips cleanly and quickly from most commercial resin systems, working up to 400°F (204°C).
<b>A100FLOGREEN</b> <sup>2</sup>	2.3 (80)	Fluorescent green, medium weight, nylon peel ply, easily visible and strips cleanly and quickly from most commercial resin systems, working up to 400°F (204°C).
<b>B100</b> <sup>3</sup>	1.7 (60)	White, lightweight nylon peel ply, which strips cleanly and quickly from most commercial resin systems, working up to 400°F (204°C).
<b>D300</b> <sup>2</sup>	2.8 (94)	Pink, medium weight nylon 6.6 peel ply easily visible and strips cleanly from most commercial resin systems, works up to 400°F (204°C).
<b>F400</b> <sup>2</sup>	2.9 (100)	White, heavyweight polyester peel ply which is recommended for use with a range of commercial systems, including phenolic resins, works up to 356°F (180°C).
<b>60001</b> <sup>3</sup>	2.5 (85)	White, medium weight polyester peel ply which strips easily and cleanly from a range of commercial systems, including phenolic resins. Approved on various aerospace specifications, suitable for use up to 400°F (204°C).
<b>51789</b> <sup>3</sup>	1.9 (65)	Medium weight nylon 6.6 peel ply for use directly against laminates or bond lines, imparting a very fine weave pattern upon removal from the laminate. Approved on various aerospace specifications and can be used up to 450°F (232°C).
<b>52008</b> <sup>3</sup>	1.7 (60)	Lightweight nylon 6.6 which has been heat set and scoured for use directly against laminates or bond lines. Imparts a very fine weave pattern upon removal from the laminate and can be used up to 450°F (232°C).
<b>70000</b> <sup>1</sup>	3.2 (108)	Heavyweight Kevlar/Aramid fabric peel ply, designed for the most demanding of vacuum bagging and metal bonding composite applications which require high strength and temperature resistance up to 800°F (427°C).

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe



# Release Film

Aerovac's release film products have been specially formulated to suit a variety of individual composite process applications. Our in-house perforation capability allows us to tightly control a variety of perforations including traditional pin-prick, hot needle and punched, in a comprehensive range of patterns. Release film can also be slit to width, cut to shape and welded into complex 3D shapes.

Product Reference	Description
<b>A2200</b> <sup>3</sup>	Clear orange, modified PE polymer film ideal for use in resin infusion and compatible with epoxy, polyester and vinylester resins up to 248°F (120°C).
<b>A2000</b> <sup>2</sup>	Red, modified, high elongation PP polymer film with excellent release characteristics and compatibility with all commonly used resin systems up to 302°F (150°C).
<b>A2500</b> <sup>2</sup>	Pink, modified PMP polymer film, with excellent release characteristics, suitable for a wide range of parting film applications up to 400°F (204°C).
<b>VAC-PAK® E2760</b> <sup>1</sup>	Red tinted, modified high elongation polymer film used in a range of release film applications up to 250°F (121°C).
<b>VAC-PAK® E3760</b> <sup>3</sup>	Clear/white release film, qualified for use in multiple aerospace composite processing applications up to 400°F (204°C).
<b>VAC-PAK® E4760</b> <sup>3</sup>	Clear/blue, modified polymer film with excellent release properties ideal for use with mild contours and flat panel applications up to 400°F (204°C).
<b>VAC-PAK® E7760W</b> <sup>3</sup>	White high modulus film suitable for use with all commonly used resin systems up to 400°F (204°C). May be a suitable alternative to other, higher elongation and PVF films. Excellent film for mildly contoured or flat parts, as it lies flat and smooth with few wrinkling issues.
<b>A5000</b> <sup>3</sup>	Redwhite or violet FEP film with high elongation and excellent release characteristics up to 500°F (260°C), approved by numerous OEMs.
<b>MR-FILM</b> <sup>2</sup>	Red/beige PTFE film with high elongation and excellent yield up to 600°F (315°C), which releases well from even the most aggressive resin systems.
<b>P720X</b> <sup>3</sup>	White, matte finish film with high modulus and low elongation providing a flat contact surface that is compatible with most commonly used resin systems and adhesives up to 200°F (93°C).

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe

## Product Focus: A6200M

This high temperature, tough fluoropolymer release film with excellent release characteristics combined with high elongation is used in aerospace applications and has numerous OEM approvals. It's one sided matt finish gives the final component the matt finish that customers are looking for. It is suitable for use with all commonly used resin systems.





# Flow Media

We offer a variety of knitted and cast diamond infusion mesh to suit both single curvature and complex tooling geometry.

Product Reference	Material	Description
<b>Vi1</b> <sup>2</sup>	PE	Knitted PE infusion mesh designed for use in vacuum assisted resin infusion processes, which allows controlled resin flow and continuous air evacuation up to 176°F (80°C).
<b>Vi2</b> <sup>2</sup>	PE	Diamond pattern PE infusion mesh designed for use in vacuum assisted resin infusion processes up to 176°F (80°C), which allows controlled resin flow and continuous air evacuation.
<b>Vi2SOFT</b> <sup>2</sup>	PE	Diamond pattern PE infusion mesh designed for use in vacuum assisted resin infusion processes up to 176°F (80°C), combining high flow characteristics with improved drape.
<b>Vi5</b> <sup>2</sup>	PET	Knitted high temp infusion mesh designed for use in vacuum assisted resin infusion processes up to 392°F (200°C), which allows controlled resin flow and continuous air evacuation.
<b>Vi6</b> <sup>2</sup>	PE	Knitted HDPE infusion mesh designed for use in vacuum assisted resin infusion processes, with improved resin flow and excellent drape characteristics at temperatures up to 176°F (80°C).
<b>R91</b> <sup>1</sup>	PE	Red diamond pattern PE infusion mesh designed for use in vacuum assisted resin infusion processes up to 176°F (80°C), which allows controlled resin flow and continuous air evacuation.
<b>R750</b> <sup>1</sup>	PE	Black diamond pattern PE infusion mesh designed for use in vacuum assisted resin infusion processes up to 176°F (80°C), which allows controlled resin flow and continuous air evacuation.
<b>N1000</b> <sup>1</sup>	PA	Knitted high temperature PA6 infusion mesh designed for use in vacuum assisted resin infusion processes up to 400°F (204°C), combining good drape with high resin flow and continuous air evacuation.

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

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## Product Focus: Kitting

Purchasing your consumable materials in kit form decreases material waste by an average of 40%, therefore lowering costs. Operator motion is reduced due to assembly-line stock and storage, and there is less margin for error as the vacuum bagging process is de-skilled. Other benefits include increased productivity, standardized working leading to better quality laminates, and health and safety benefits through reduced materials handling.

### Aerovac process materials offers three levels of kit:

- Basic kits – material slit to defined widths, most suited to simple, high volume, or large shapes.
- Intermediate kits – packs of cut shapes grouped together and stored by product group.
- Full kits – 3D shaped combination products and all the parts for a particular composite structure.

## Product Focus: Welded and Reusable Vacuum Bags

We also offer welded vacuum bags (WVBs) and reusable vacuum bags (RVBs) made from rubber and boosting the industry's most advanced sealing systems. We enjoy long-standing relationships with global OEMs, and have developed practical working solutions that have reduced waste, benefited the environment, and importantly, increased productivity for all of our customers.

## Release Fabric

Light to heavyweight woven fabrics available in nylon, glass and polyester, with silicone, fluorocarbon and PTFE coatings to satisfy various resin systems and cure temperature requirements. Release fabric is available in standard formats, slit widths and cut to shape.

Product Reference	Weight oz/ yd <sup>2</sup> (g/m <sup>2</sup> )	Description
<b>200TFP</b> <sup>3</sup>	Range available	Beige, porous PTFE-coated plain weave fiberglass cloth, resistant to all solvents, adhesives and resin systems normally encountered in composite and metal-bond manufacture. Works up to 550°F (288°C).
<b>B4444</b> <sup>3</sup>	1.7 (60)	Green, lightweight nylon fabric, coated with heat cured silicone release solution to aid removal from the cured laminate working up to 400°F (204°C).
<b>A8888</b> <sup>3</sup>	2.3 (80)	Green, medium weight nylon fabric, coated with heat cured silicone release solution to aid removal from the cured laminate, working up to 400°F (204°C).
<b>BR100</b> <sup>2</sup>	1.7 (60)	Pink, lightweight nylon fabric, coated with a heat stabilized fluorocarbon release solution. The fabric imparts a fine weave finish and controls resin bleed closely and strips easily from resin rich composites, operating at temperatures up to 400°F (204°C).
<b>200TFNP</b> <sup>3</sup>	3.2 (108)	Non-porous, PTFE-coated, plain weave fiberglass cloth which is designed as a release fabric which will prevent resin from bleeding through the release fabric and into the breather fabric. Imparts a gloss finish to laminate surface and works up to 550°F (288°C).
<b>FF03A</b> <sup>2</sup>	4.3 (145)	Non-porous, PTFE-coated, plain weave fiberglass cloth which is designed as a release fabric which will prevent resin from bleeding through the release fabric and into the breather fabric. Imparts a gloss finish to laminate surface and works up to 550°F (288°C).
<b>FF05A</b> <sup>2</sup>	8 (270)	Non-porous, PTFE-coated, plain weave fiberglass cloth which is designed as a release fabric which will prevent resin from bleeding through the release fabric and into the breather fabric. Imparts a gloss finish to laminate surface and works up to 550°F (288°C).
<b>FF10A</b> <sup>2</sup>	14.7 (500)	Non-porous, PTFE-coated, plain weave fiberglass cloth which is designed as a release fabric which will prevent resin from bleeding through the release fabric and into the breather fabric. Imparts a gloss finish to laminate surface and works up to 550°F (288°C).
<b>200TFP-1</b> <sup>3</sup>	1.4 (46)	Tan colored, lightweight, PTFE coated glass fabric which allows excess resin, volatiles and trapped air to bleed through and be absorbed into the breather, or vented away from the assembly, operating in temperatures up to 608°F (320°C).
<b>FF03PM</b> <sup>2</sup>	1.8 (63)	Brown, lightweight, porous, PTFE coated glass fabric, which is ideal for use on flat or single curvature moldings in extreme temperature and pressure conditions, up to 608°F (320°C).
<b>FF05PM</b> <sup>2</sup>	3.8 (130)	Brown, medium weight, porous, PTFE coated glass fabric, which is ideal for use on flat or single curvature moldings in extreme temperature and pressure conditions, up to 608°F (320°C).
<b>FF10PM</b> <sup>2</sup>	6.8 (230)	Brown, heavyweight, porous, PTFE coated glass fabric, which is ideal for use on flat or single curvature moldings in extreme temperature and pressure conditions, up to 608°F (320°C).

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe



# Sealant Tape

Aerovac offers a comprehensive range of sealant tapes that have been tried and tested in many different and challenging manufacturing environments. Our tapes have been specially formulated to suit a range of cure temperatures, from ambient cures to high temperature thermoplastic cures of 752°F (400°C) to meet your requirements. Various weights are available.

Product Reference	Temperature °F (°C)	Description
<b>LTS90B/G</b> <sup>3</sup>	414 (150)	Black/gray tape ideal for de-bulk and medium temperature applications, such as wind energy, marine and glass laminating, up to 414°F (150°C).
<b>UCS180</b> <sup>3</sup>	356 (180)	Cream tape with high tack and elongation, which also strips easily from the part, ideal for composite/metal bonding applications in an oven or autoclave up to 356°F (180°C).
<b>SM5127W</b> <sup>1</sup>	250 (121)	Dark gray tape with good tack and snap back, ideal for oven curing temperatures of up to 250°F (121°C).
<b>SM5142W</b> <sup>1</sup>	250 (121)	Yellow tape with good tack and snap back, ideal for oven curing temperatures of up to 250°F (121°C).
<b>SM5127</b> <sup>3</sup>	400 (204)	Dark gray tape which strips cleanly and quickly after cures up to 400°F (204°C), and is approved on a number of major aerospace specifications.
<b>SM5130</b> <sup>2</sup>	400 (204)	Grey tape, predominantly used for debulk operations in aerospace applications up to 400°F (204°C). Low tack for ease of bag repositioning, and strips cleanly and quickly after curing.
<b>SM5142</b> <sup>3</sup>	400 (204)	Yellow tape with good tack and snap back, ideal for ambient, oven and autoclave curing temperatures of up to 400°F (204°C).
<b>SM5143</b> <sup>2</sup>	424 (218)	Yellow tape with good tack and snap back, ideal for oven and autoclave curing temperatures of up to 424°F (218°C).
<b>SM5144</b> <sup>3</sup>	424 (218)	Yellow tape which achieves excellent positive vacuum seal and strips cleanly and quickly after cures up to 424°F (218°C), approved on a number of major aerospace specifications.
<b>SM5126</b> <sup>3</sup>	450 (232)	Dark gray versatile tape ideal for oven and autoclave applications up to 450°F (232°C) which is approved on various aerospace specifications
<b>SM5160</b> <sup>3</sup>	752 (400)	Dark brown tape ideal for ultra-high temperature applications up to 752°F (400°C), where traditional tapes will not survive.
<b>SM5153</b> <sup>3</sup>	400 (204)	Yellow tape with good tack and snap back, ideal for oven and autoclave curing temperatures of up to 424°F (218°C).
<b>RS 200</b> <sup>1</sup>	400 (204)	Grey tape developed for use in composite and metal bond fabrication and is excellent for bag sealing epoxies, polyesters, phenolics and other adhesives and prepregs at temperatures up to 400°F (204°C).

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe

## Product Focus: UCS180

A specially formulated new sealant tape for metal bonding and vacuum bagging composite manufacture, UCS180 is designed to meet all the standard sealant tape characteristics with one key difference – easy release after cure.

Whilst exhibiting excellent tack and high elongation, extensive testing against industry standard brands has shown UCS180 requires significantly less force to strip away from various tooling surfaces over a range of different cure/heat cycles (particularly beneficial following high temperature and pressure oven and autoclave cures).

With easy release characteristics, UCS180 also leaves significantly less residue on well used tooling surfaces, extending the timeframe before operators need to perform cleaning and tooling maintenance.

## Adhesive Tape

Our specially formulated high temperature, pressure sensitive adhesive tapes are designed for a range of applications such as the removal of resin flash, localized release and positioning of consumable material. Our tapes are available in polyester, nylon, PTFE and polyimide.

Product Reference	Temperature °F (°C)	Description
<b>FlashTape 1</b> <sup>3</sup>	400 (204)	Blue polyester tape with pressure sensitive acrylic/rubber/silicone adhesive, excellent temperature and pressure resistance up to 400°F (204°C).
<b>FlashTape 2</b> <sup>3</sup>	400 (204)	Turquoise polyester tape with pressure sensitive acrylic/silicone adhesive, excellent temperature and pressure resistance up to 400°F (204°C).
<b>FlashTape 5</b> <sup>3</sup>	400 (204)	Blue polyester tape with pressure sensitive acrylic/silicone adhesive, high strength carrier/backer with excellent temperature and pressure resistance up to 400°F (204°C).
<b>FlashTape 1R, 2R &amp; 5R</b> <sup>3</sup>	400 (204)	Multipurpose polyester tape with a high temperature (400°F / 204°C) rubber adhesive, designed for use in areas where a thicker, stronger tape is required.
<b>FT8</b> <sup>3</sup>	356 (180)	Green polyester tape with rubber adhesive, ideal for use up to 356°F (180°C), when silicone adhesives are likely to cause surface contamination.
<b>VAC-PAK®- HS 8171-PS</b> <sup>3</sup>	400 (204)	Green high temperature (400°F / 204°C) nylon tape with a pressure sensitive, rubber-base adhesive. High elongation properties provide a high degree of conformability, and high stretch and thinness offer excellent conformability and clean, sharp edges.
<b>POLY1</b> <sup>2</sup>	500 (260)	Amber polyimide tape with silicone adhesive, ideal for high temperature applications up to 500°F (260°C).
<b>Series 6325</b> <sup>1</sup>	800 (426)	Pressure sensitive tape comprising polyimide film with a high temperature fully cured silicone adhesive. Ideal for high temperature (800°F / 426°C) under standard vacuum bagging conditions) laminate processing due to unique mechanical & thermal properties of the carrier.
<b>LETAPE</b> <sup>2</sup>	450 (232)	Brown PTFE tape with pressure sensitive acrylic/silicone adhesive, ideal for many applications including tool surface repairs and tight angle tooling geometry, at temperatures up to 450°F (232°C).
<b>TOOLCOAT</b> <sup>1</sup>	500-550 (260-288)	Tetrafluoroethylene (TFE) coated fiberglass pressure sensitive tape, with a fully cured silicone or acrylic adhesive. Adheres to tool surfaces to provide multiple releases on all types of tooling surfaces.

<sup>1</sup> Primarily used in the US, please contact your local Aerovac Process Materials site for availability details

<sup>2</sup> Primarily used in Europe, please contact your local Aerovac Process Materials site for availability details

<sup>3</sup> Used in US and Europe

## Tapes and Sprays

Double-sided tapes and adhesive sprays used to secure dry fabrics and core materials during the infusion layup.

### Product Focus: AEROFIX 3

A unique repositionable spray adhesive designed for use in the manufacture of polyester and vinylester composites. AEROFIX 3 has high adhesion strength with gelcoat, barriercoat, glass fiber matting and fiberglass laminates, and does not compromise the mechanical performance of laminates – even if used in higher quantities than required.

Unlike other industry standard products, AEROFIX 3 does not compromise or inhibit polymerisation of resin systems, and neither does it weaken the degree of interlaminar adhesion between the different layers of the laminate.

The blue colorant makes it possible to assess and regulate the quantity of AEROFIX 3 applied, with the color disappearing during polymerization.



## Self-Adhesive Tool Release

Self-adhesive PTFE based tool release materials available either unsupported or glass reinforced, with silicone and acrylic adhesive – also available in premium grades. These semi-permanent tool release products save time by eliminating the need to reapply chemical release agents following every cure. In some situations these materials can also solve tool porosity issues and prolong tool life.

## Miscellaneous Items

Aerovac also supplies a wide range of rubber silicone and latex, vacuum fittings and hoses, infusion materials products, ancillaries and accessories. For more information and full availability details, please contact your local contact, or visit our website.

### Infusion Products

These products are specially designed to transport the liquid resin from the barrel into the sealed system, help distribute the resin uniformly underneath the vacuum bag and restrict the resin flow.

They also protect the vacuum hoses and pumps, help control the volumes of resin pulled into the part and offer both reusable and disposable methods for resin distribution. They range from low cost disposable plastic inlet ports and T-piece connectors to specialist flow meshes, breather membranes, reusable resin channels and advanced formulated spray adhesives.

### Vacuum Hoses and Ancillaries

A range of products are available to meet all workshop, oven and autoclave vacuum requirements. Vacuum hoses are constructed on site with different color options, materials, use temperatures and termination connectors. In addition, vacuum breach units, plug and socket couplings, gauges manifolds and other ancillaries are also available.

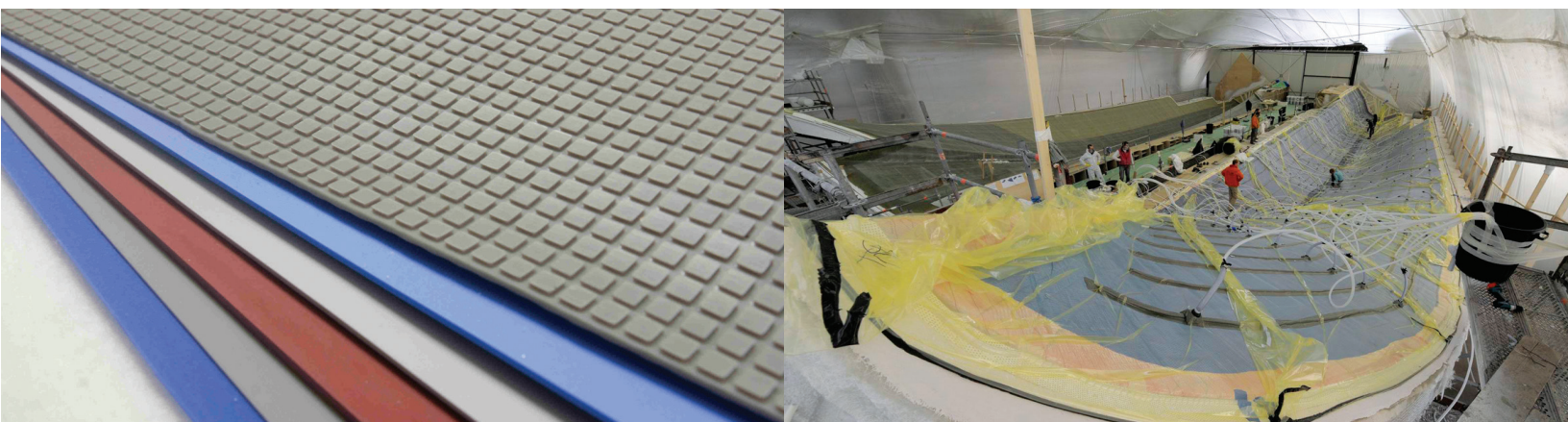
### Rubber, Silicone and Fluoroelastomer

Our extensive range of natural rubber, silicone and fluoroelastomer materials, which excellent resin compatibility, high elongation and good tear strength characteristics, can be used in the construction of custom made reusable vacuum bags (RVB), specialist B-surface caul plates, intensifiers or pressure pads. These materials are available in sheet form for independent fabrication. Alternatively, we offer a complete in-house RVB manufacturing service.

Also available are a range of silicone profiles and molded pieces for Resin Transfer Molding (RTM), Resin Transfer Injection (RTI), liquid resin infusion and all vacuum bonding/laminating applications.

### Miscellaneous

Ancillary products for the manufacture of composites include cutting, molding and pre-forming products as well as specialist leak detectors.



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