

Vacuum Bagging Materials for Resin Infusion

Spring 2020



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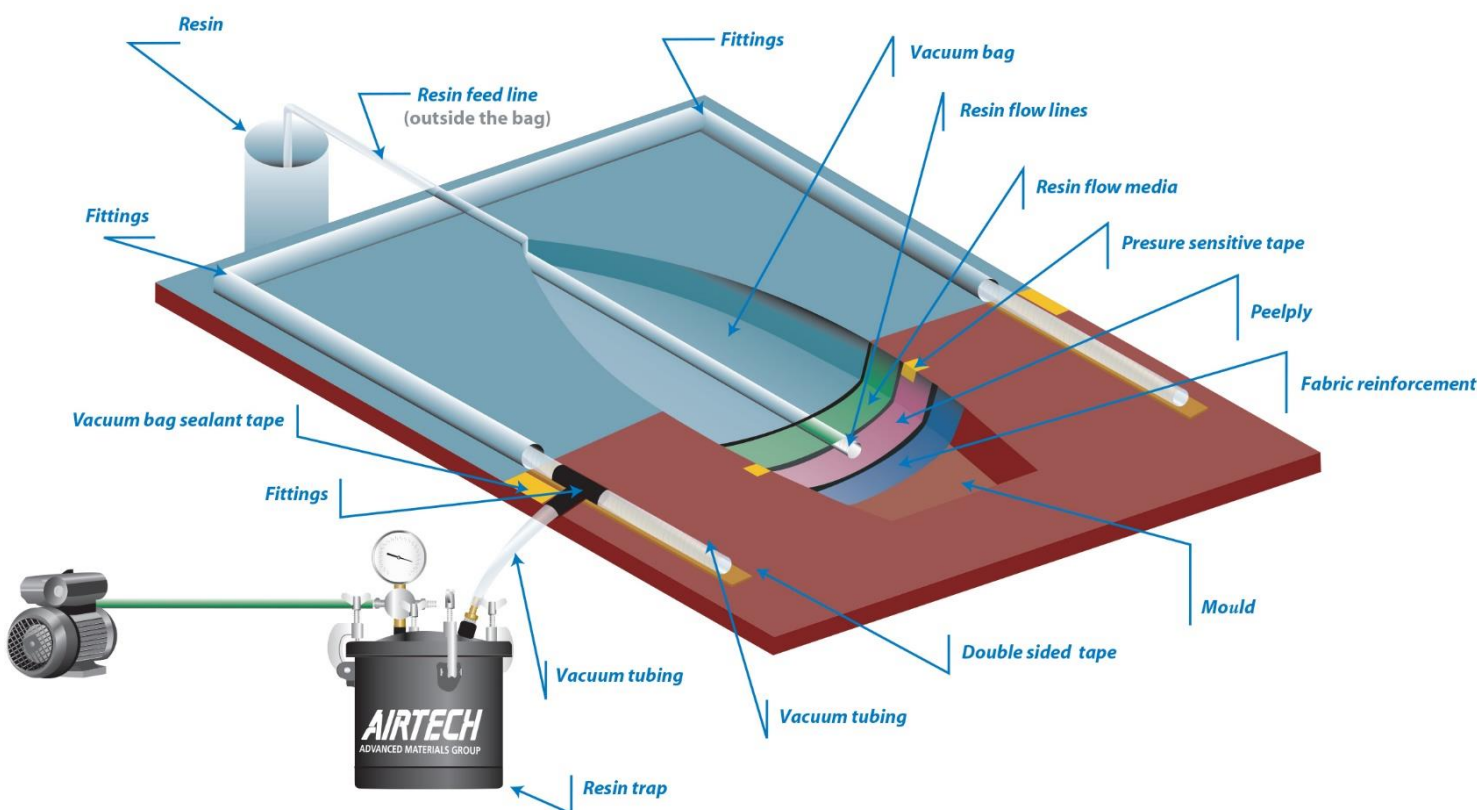
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Welcome

What's New for Infusion in Spring 2020

Latest product news from Tygavac Advanced Materials Ltd.



Airtac 2 LH Spray adhesive

Airtac 2 Low Hazard is a fine mist spray adhesive with excellent tack and bond strength for hold dry fabric reinforcements and vacuum bag materials during infusion setups.

Airtac 2 LH is lower cost and safer to use than standard shop adhesive sprays.



Flowstrip Resin Feeder

Flowstrip is a lay flat resin feed channel constructed with a high speed 3D mesh inside a highly porous non-woven polyester sleeve.

Flowstrip is an extremely efficient resin flow channel which is easy to position on infusion laminates and vacuum bag.

VBS 120 Low cost vacuum sealant tape

Tygavac sealant tape VBS 120 is a low cost vacuum bag sealant tape for tight seals between vacuum bag films and infusion ancillaries.



AT-200Y Economical multi-purpose sealant tape

AT-200Y is an economical multi-purpose sealant tape with high tack. It removes easily from metal or composite tools. Suitable for cure applications up to 204°C.



EconoTape PS Tape

EconoTape 1 is an inexpensive, multipurpose, silicone based adhesive, pressure sensitive tape. EconoTape 1 can be used for room temperature to 350°F (177°C) applications.

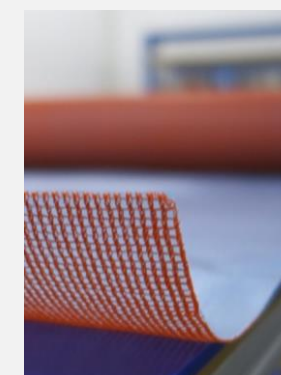


Tac-Strip HT Adhesive glass mesh

Tac-Strip HT is a fiberglass fabric mesh tape coated on both sides with a "high-tack" pressure sensitive adhesive. Tac-Strip HT is designed to hold dry fabrics in place as required when using resin infusion, resin transfer moulding, and other processes requiring dry fabric lay-up.

Flowlease Mesh/Film Combo

Combo-Tech Technology from Airtach combines materials for great labour savings during layup process. Flowlease combine perforated release films and resin flow mesh. Flowpeel combines peel ply, perforated release film and resin flow mesh. Combination of products are applied in one operation as opposed to applying one layer at a time.



Flowpeel Mesh/Film/Peel Ply Combo

Flowpeel combines flow mesh with perforated release film and peel ply fabric. Great labour savings can be achieved by having combination of products applied in one operation as opposed to applying one layer at a time.



Vacuum bagging films

Unfolding wide vacuum bag film



Benefits of infusion

- The vacuum bag compresses the layers of fabric together to improve quality and fibre volume fraction.
- Vacuum pressure can then be used to draw liquid resin into the dry fabrics.
- Infusion is a clean process, resin waste is reduced and emissions eliminated.

Benefits of Airtech films

- Airtech manufactures wide film so large parts can be vacuum bagged faster.
- Wide film means less touch labour to seal them by hand.
- Reduce the risk of leakage in joint areas with a single piece of film.
- Airtech manufactures lower cost films, that work well for infusion process.
- Our films are robust for busy workshops.

Up to
16 metres
wide & no
seams

Big Blue L-100 vacuum bag film

Airtech manufactured vacuum bag films made for infusion

Big Blue L-100

Widest Film

Maximum Use Temperature	Elongation	Tensile Strength	Film Sizes (Inches)	Film Sizes (Metric)	/	Roll Width
121°C	350%	21 MPa	0.003" x 157" SWF x 557ft	75 µm x 4m SWF x 170m		(2m wide roll)
Description			0.003" x 236" SWF x 360ft	75 µm x 6m SWF x 110m		(1.75m wide roll)
Big Blue L-100 vacuum bag film is a multi-layer film for applications where a wide film is required. It is suitable for resin infusion and wet lay-up where the cure temperature does not exceed 121°C.			0.003" x 315" DWF x 272ft	75 µm x 8m DWF x 83m		(2.20m wide roll)
			0.003" x 394" DWF x 219ft	75 µm x 10m DWF x 67m		(1.70m wide roll)
			0.003" x 472" MWF x 183ft	75 µm x 12m MWF x 56m		(1.70m wide roll)
			0.003" x 630" MWF x 98ft	75 µm x 16m MWF x 30m		(2.30m wide roll)



Wrightlon® 250Y

New Low Cost Film

Maximum Use Temperature	Elongation	Tensile Strength	Roll Sizes (Inches)	Roll Sizes (Metric)
150°C	400%	41 MPa	0.002" x 24" LFT x 1000ft	50 µm x 610mm LFT x 304m
Description			0.002" x 36" LFT x 1000ft	50 µm x 914mm LFT x 304m
Wrightlon® 250Y vacuum bagging film has high elongation, flexibility and tensile strength. The enhanced physical values allow for added security even in harsh environments. Wrightlon® 250Y is well suited for marine and other commercial vacuum bagging applications.			0.002" x 48" LFT x 1000ft	50 µm x 1.22m LFT x 304m
			0.002" x 60" LFT x 1000ft	50 µm x 1.52m LFT x 304m
			0.002" x 80" LFT x 750ft	50 µm x 2.03m LFT x 228m

Other sizes and formats available up to maximum 7m wide sheeting



L-550G

Maximum Use Temperature	Elongation	Tensile Strength	Roll Sizes (Inches)	Roll Sizes (Metric)
171°C	400%	52 MPa	0.002" x 18" LFT x 1000ft	50 µm x 457mm LFT x 304m
Description			0.002" x 24" LFT x 1000ft	50 µm x 610mm LFT x 304m
L-550G vacuum bagging film is available in wide sizes and has high elongation and high tensile strength. The enhanced physical values allow for added security even in harsh environments. L-550G is well suited for wind energy, marine, and other commercial applications.			0.002" x 36" LFT x 1000ft	50 µm x 914mm LFT x 304m
			0.002" x 48" LFT x 1000ft	50 µm x 1.22m LFT x 304m
			0.002" x 60" LFT x 1000ft	50 µm x 1.52m LFT x 304m
			0.002" x 80" LFT x 750ft	50 µm x 2.03m LFT x 228m
			0.002" x 90" LFT x 750ft	50 µm x 2.29m LFT x 228m

Other sizes and formats available up to maximum 7m wide sheeting



Wrightlon® 600V

Strongest Film

Maximum Use Temperature	Elongation	Tensile Strength	Roll Sizes (Inches)	Roll Sizes (Metric)
204°C	400%	65 MPa	0.002" x 18" LFT x 1000ft	50 µm x 457mm LFT x 304m
Description			0.002" x 24" LFT x 1000ft	50 µm x 610mm LFT x 304m
Wrightlon® 600V vacuum bagging film is designed for low cost, commercial applications. It has good elongation and stays soft in low humidity conditions.			0.002" x 36" LFT x 1000ft	50 µm x 914mm LFT x 304m
			0.002" x 48" LFT x 1000ft	50 µm x 1.22m LFT x 304m
			0.002" x 60" LFT x 1000ft	50 µm x 1.52m LFT x 304m
			0.002" x 80" LFT x 750ft	50 µm x 2.03m LFT x 228m

Other sizes and formats available up to maximum 7m wide sheeting



*SHT=Sheeting



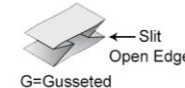
CF=Centerfold



LFT=Lay-Flat Tubing



GT=Gusseted Tubing



G=Gusseted



SWF=Single W-Fold



DWF=Double W-Fold



MWF=Multiple W-Fold

Other products, sizes & formats are available, please visit www.tygavac.co.uk and contact Tygavac customer service representative for complete details.

Release films

Combo-Tech with WL3700 P16

Benefits of release films

- Release films peel easily off cured laminates, easier than peel plies.
- Resin flow mesh can easily be removed after cure when placed on a release film.
- Perforations have dual function of air removal, then resin flow into laminate.



Benefits of Airtech films

- Airtech manufactures release films for the infusion process with low cost.
- Airtech perforates release films with styles suitable for different process types.
- Airtech can provide wide perforated films and narrow slit width film to save you time cutting and joining films.

WL3700 P16 perforated film

Perforated release films made for infusion

Wrightlon® 3700

Low Cost Film

Maximum Use Temperature	Elongation	Tensile Strength	Perforation Style	Roll Sizes (Inches)	Roll Sizes (Metric)
121°C	350%	21 MPa			
Description			WL3700	0.001" x 60" x 2000ft	25 µm x 1.52m x 609m
Wrightlon® 3700 is a release film that is designed for low cost applications. Wrightlon® 3700 will release from epoxy, polyester and vinyl ester resin systems.			WL3700 P3	0.001" x 60" x 2000ft	25 µm x 1.52m x 609m
			WL3700 P16	0.001" x 60" x 2000ft	25 µm x 1.52m x 609m

Dahlar® Release Bag 125

Maximum Use Temperature	Elongation	Tensile Strength	Perforation Style	Roll Sizes (Inches)	Roll Sizes (Metric)
140°C	400%	65 MPa			
Description			RBG125	0.001" x 60" x 2000ft	25 µm x 1.52m x 609m
Dahlar® Release Bag 125 is an economical film designed for release film applications. It can be used for cures up to 140°C and will release from most resins, and has good tear resistance and elongation.			RBG125 P3	0.001" x 60" x 2000ft	25 µm x 1.52m x 609m

Wrightlon® 3900

Maximum Use Temperature	Elongation	Tensile Strength	Perforation Style	Roll Sizes (Inches)	Roll Sizes (Metric)
157°C	500%	41 MPa			
Description			WL 3900R	0.0012" x 60" x 3280ft	30 µm x 1.52m x 1000m
Wrightlon® 3900 release film is a high elongation film which will exhibit excellent release properties from polyester, vinyl ester and epoxy resin systems. It will take temperature up to 157°C.			WL 3900R P3	0.0012" x 60" x 3280ft	30 µm x 1.52m x 1000m

Commonly used perforations

Perforation Style	Nominal Hole Diameter	Description (Inches)	Description (Metric)	Maximum Width
P3	0.015 inch (0.381 mm)	Staggered 0.25 inch centres	Staggered 6.3 mm centres	72 inches (182.9 cm)
P16	0.016 inch (0.406 mm)	Staggered 0.118 inch centres	Staggered 3.0 mm centres	72 inches (182.9 cm)
MP22	0.016 inch (0.406 mm)	Staggered 0.059 inch centres	Staggered 1.5 mm centres	72 inches (182.9 cm)

NOTES:

- Other sizes / slit master rolls are available special order, please contact Tygavac customer service representative for complete details.
- Other perforations are available, see available perforation data sheet on www.tygavac.co.uk

Pressure sensitive tapes

Tapes for holding, fixing, masking, releasing and protecting

Flashbreaker® Orange in infusion setup



Benefits of tapes for infusion

- Tapes hold infusion materials in the right place to achieve efficient infusion strategies. Safeguarding part quality and operator safety.
- Airtech tapes hold and fix materials without affecting infusion performance.
- Single sided tapes and double sided tapes provide options for holding materials on the tool and on each other.

Benefits of Airtech tapes

- Polyester tapes are an economical choice with excellent strength.
- Wrightlease tape is a self releasing fluoropolymer which can be used where resin release is required e.g. mould surface.
- Tacstrip is an adhesive mesh for holding dry fabrics in place when building parts.



Successful infusion complete

EconoTape 1

Low Cost Tape

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
177°C	Polyester	Silicone	Green	1" x 72 yards	25mm x 66m
Description					
EconoTape 1 is an inexpensive, multipurpose, silicone based adhesive, pressure sensitive tape. This tape can be used for holding down vacuum bagging materials, thermocouples, and other lay-up items. EconoTape 1 can be used for room temperature to 350°F (177°C) applications.					



Airhold 10 CBS

Workshop Essential

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
60°C	Cloth	Rubber	White	1" x 36 yards 2" x 36 yards	25mm x 33m 50mm x 33m
Description					
Airhold 10 CBS is a double-sided fabric reinforced tape with a rubber based adhesive on both sides. It can also be used to hold down plastic spiral wrap used as a vacuum manifold in the resin infusion process.					



Wrightlease 2

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	Fluoropolymer	Silicone	Orange	1" x 36 yards 2" x 36 yards	25mm x 33m 50mm x 33m
Description					
Wrightlease is a non-stick tape for applications where resin release is required. The orange colour is highly visible on most substrates in addition to offering high elongation and tensile strength. Wrightlease 2 has 0.002" thick film and is a low cost non-stick tape solution.					



Wrightlease 4

Strongest Release Tape

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	Fluoropolymer	Silicone	Orange	1" x 36 yards 2" x 36 yards	25mm x 33m 50mm x 33m
Description					
Wrightlease is a non-stick tape for applications where resin release is required. The orange colour is highly visible on most substrates in addition to offering high elongation and tensile strength. Wrightlease 4 has 0.004" thick film and is stronger and tougher and is a low cost non-stick tape solution for demanding applications.					



Teflease MG2

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	PTFE	Silicone	Brown	1" x 36 yards 2" x 36 yards	25mm x 33m 50mm x 33m
Description					
Teflease MG2 is a PTFE film coated with a silicone adhesive. They are ideal for use on tooling blocks and all areas where high elongation and release is needed. Teflease MG tapes will form to critical contours and mould surfaces while offering multiple releases or may be used to cover multiple detail mould seams.					



Flashbreaker® 1

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
204°C	Polyester	Silicone	Blue or Orange	1" x 72 yards 2" x 72 yards	25mm x 66m 50mm x 66m
Description					
Flashbreaker® tapes are high strength polyester films coated with a silicone adhesive for multi-purpose functions such as holding down vacuum bagging materials. Flashbreaker® tapes remove easily after cure. The orange Flashbreaker® tapes have high visibility when placed on parts and moulds.					



Mould release

Release films and fabrics with adhesive for permanent tool release



Toolwright 3 on shaped moulds

Benefits of mould releases

- Self adhesive mould release films provide a permanent release surface, avoiding need for multiple applications of liquid release.
- They can be applied to worn tools to extend mould life, avoiding retooling costs.
- Patterns and Masters can be covered with self adhesive mould release film faster than paint and release liquid.



Toolwright 3 on shaped master model

Benefits of Airtech mould releases

- Airtech manufactures self adhesive mould release films, ensuring excellent surface smoothness and even adhesive coating, for high quality parts.
- Airtech supplies fibre reinforced mould release for applications where flat hard wearing surfaces are required.
- Solid Fluoropolymer mould release (with no fibre reinforcement) can be applied over curved and compound curved complex surfaces.

TFG-S-075 AH

Maximum Use Temperature	Fabric	Adhesive	Total Thickness	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	75µm PTFE Coated Fibreglass	Silicone	125µm	39" x 98 feet	1m x 30m
Description					

TFG S 075 AH is a general purpose PTFE coated glass fabric tape with medium gloss coating suitable for consideration when cost is a prime factor.

TFG-S-125 AH

Hard Wearing Option

Maximum Use Temperature	Fabric	Adhesive	Total Thickness	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	125µm PTFE coated fibreglass	Silicone	175µm	39" x 98 feet	1m x 30m
Description					

TFG S 125 AH is a general purpose PTFE coated glass fabric tape with medium gloss coating suitable for consideration when cost is a prime factor. Can be used on the tool face to give a permanent release surface eliminating the need to apply release agents. Low coefficient of friction allows resin to flow easily against the surface. Mould tools with imperfections/ pinholes can be covered to produce a suitable tooling surface

Toolwright 3

Low Cost Release

Maximum Use Temperature	Film Carrier	Adhesive	Total Thickness	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	50µm extruded fluoropolymer	Silicone	75µm	50" x 18 yards	1.27m x 16.5m
Description					

Toolwright 3 is a light orange extruded fluoropolymer film coated with silicone pressure sensitive adhesive. Toolwright 3 has high elongation, good tear strength, high temperature resistance and excellent clean up after removal.

Toolwright 5

Maximum Use Temperature	Film Carrier	Adhesive	Total Thickness	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	100µm extruded fluoropolymer	Silicone	125µm	46" x 18 yards	1.17m x 16.5m
Description					

Toolwright 5 is an extruded fluoropolymer film coated with silicone pressure sensitive adhesive. The orange colour is highly visible on most substrates in addition to offering high elongation and tensile strength.

Tooltec® CS5

Super Gloss Finish

Maximum Use Temperature	Film Carrier	Adhesive	Total Thickness	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	127µm PTFE	Silicone	165µm	36" x 18 yards	914mm x 16.5m
Description					

Tooltec® CS5 is a PTFE film coated with a high temperature silicone pressure sensitive adhesive. It can be used to seal masters and leaky tool surfaces while providing semi-permanent and contamination free part release. Tooltec® CS5 is a non-reinforced mould surface reconditioning tape allowing conformance to complex contours and providing a semi-permanent release for contoured shapes.

Release fabric & Peel ply

Econostitch® being tailored with Electric shears

Benefits of peel ply

- Fabrics peeled off after cure leaving textured surfaces for paint & bonding preparation.
- Econoply & Econostitch® products are low cost high quality peel plies.
- They can be used for resin infusion, hand layup and prepreg applications.

Benefits of coated peel ply

- Coated peel plies have a release coating that makes removal after cure much easier.
- Coated peel plies save time and effort when resin-soaked infusion mesh becomes stiff and rigid after cure.
- PTFE coated fibreglass release fabrics provide even greater release, temperature resistance and strength.

Econolease coated peel ply on laminate

Fabrics for textured surfaces for paint & bonding preparation

Econostitch®

Maximum Use Temperature	Fibre Type	Weight	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
190°C	Nylon	88 g/m²	White / Red Tracer		
Description					
Econostitch® is a heat set and scoured nylon peel ply with red tracers which make this peel ply more visible before and after a cure, reducing the possibility of the peel ply being left on the part. Our Econo peel plies are designed to work in resin infusion or hand lay-up processes. Econostitch® assists or eliminates the need for sanding or abrading on your composite laminate.				60" x 300 yards	1.52m x 274m
				60" x 100 yards	1.52m x 91m



Econostitch® G

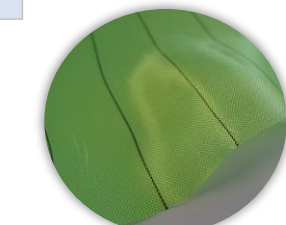
Infusion Essential

Maximum Use Temperature	Fibre Type	Weight	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
190°C	Polyester	85 g/m²	White / Black Tracer		
Description					
Econostitch® G is an economical peel ply with good performance when used with both polyester and epoxy resins. It has black tracers with high visibility to reduce the risk of peel ply being left on the part. Our Econo peel plies are designed to work in resin infusion or hand lay-up processes. Econostitch® G assists or eliminates the need for sanding or abrading on your composite laminate.				71" x 218 yards	1.8m x 200m



Econostitch® G Fluorescent

Maximum Use Temperature	Fibre Type	Weight	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
190°C	Polyester	85 g/m²	Fluoro-Green / Black Tracer		
Description					
Econostitch® G is an economical peel ply with good performance when used with both polyester and epoxy resins. It has black tracers with high visibility to reduce the risk of peel ply being left on the part. Our Econo peel plies are designed to work in resin infusion or hand lay-up processes. Econostitch® G assists or eliminates the need for sanding or abrading on your composite laminate.				71" x 218 yards	1.8m x 200m



Econolease

Easy Release

Maximum Use Temperature	Fibre Type	Weight	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
204°C	Nylon Silicone Coated	61 g/m²	Light blue		
Description					
Econolease is a silicone treated nylon peel ply which provides greater release in difficult environments. Our Econo peel plies are designed to work in resin infusion or hand lay-up processes. All coated peel plies have the potential to transfer.				60" x 100 yards	1.52m x 91m



TFG S 075P

Maximum Use Temperature	Fibre Type	Thickness	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
260°C	PTFE Coated Fibreglass	75µm	Brown		
Description					
TFG S 075P bleed out fabrics are porous, PTFE coated glass fabrics which will provide release from all conventional resin systems. Porous products will allow excess resin, volatiles and trapped air to escape into the breather during cure while non-porous products will retain resin.				39" x 109 yards	1m x 100m



Vacuum sealant tapes



Closing a large vacuum bag with sealant tape

Benefits of sealant tapes

- Vacuum sealant tapes close the vacuum bag to allow vacuum pressure to be made.
- Tapes can join bag to bag seams and seal vac bags to tool surfaces.
- "Pleats" can be made with tape to tailor the bag shape to fit the mould.
- Tubing & pipe connections can be sealed with tape to ensure total vacuum is kept.

Benefits of Airtech sealant tapes

- Larger roll sizes better suited to large bag constructions.
- Good clean up performance for less time spent cleaning tools.
- Firm hold and resistance to shear for secure seals to avoid loss of vacuum and air shots into infused laminates.
- Low cost sealant tapes manufactured for economic infusion processing.
- Excellent tack level for secure adhesion to films to mould surfaces.
- Higher tack options for colder workshop environments.



Sealant tape closing bag and resin feed tubes

Sealing vacuum bags to tools & sealing around tubing connections

VBS 120

New Low Cost Tape

Maximum Use Temperature	Colour	Base Materials	Tack Level	Sizes
120°C	Black	Synthetic rubber	Good tack	3mm x 12mm x 15m
Description				

Tygavac sealant tape VBS 120 is a low cost vacuum bag sealant tape developed for creating tight seals between vacuum bag to vacuum bag processes.



Airseal 2T

Workshop Essential

Maximum Use Temperature	Colour	Base Materials	Tack Level	Sizes
150°C bag to tool 180°C bag to bag	Black	Synthetic rubber	High tack	3mm x 12mm x 15m 3mm x 9mm x 15m 2mm x 10mm x 20m 2mm x 7mm x 20m
Description				

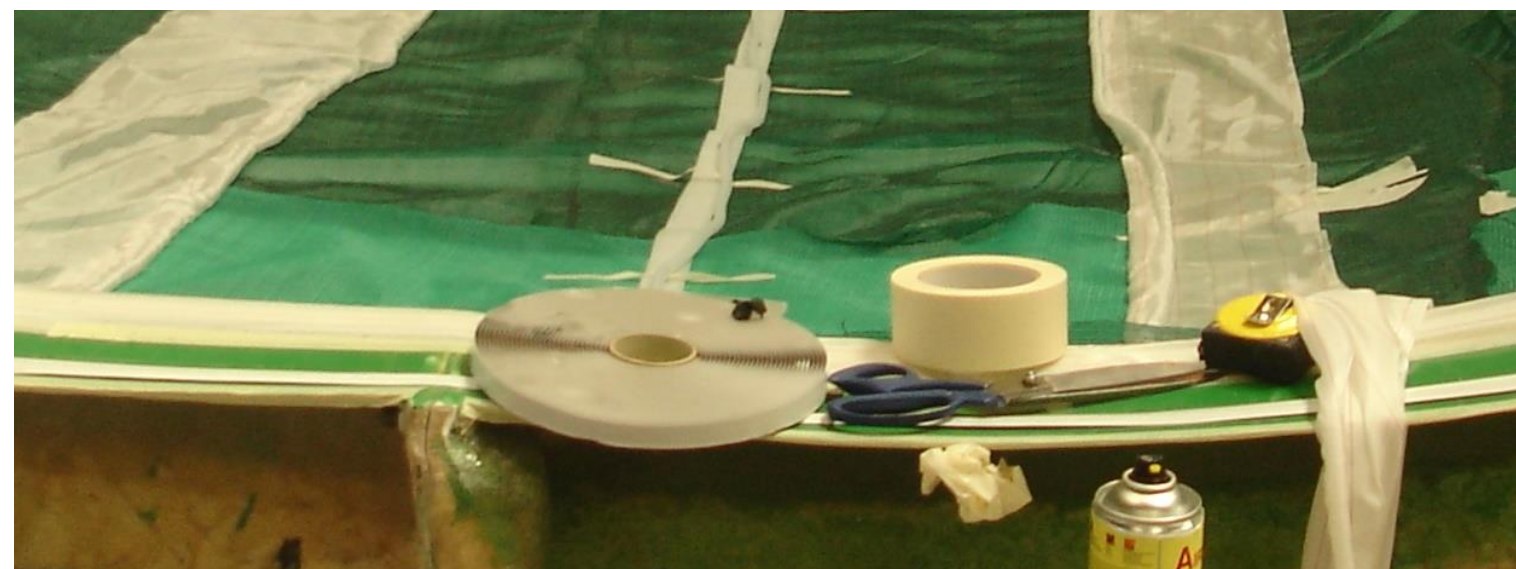
Airseal 2T is a cost effective vacuum bag sealant tape for room and medium temperature applications. Airseal 2 has excellent tack, firm feel, good clean-up and long shelf life. It can also be used for higher temperature envelope bag applications. Airseal 2 Tacky has superior tack for colder environments.



AT-200Y

Maximum Use Temperature	Colour	Base Materials	Tack Level	Sizes
204°C	Yellow	Synthetic rubber	High tack	3mm x 12mm x 7.6m
Description				

AT-200Y is an economical multi-purpose sealant tape with high tack. It removes easily from metal or composite tools. Suitable for cure applications up to 204°C.



Resin flow products

Resin flow mesh for flow over part surfaces

Greenflow 75 allows resin flow over part area

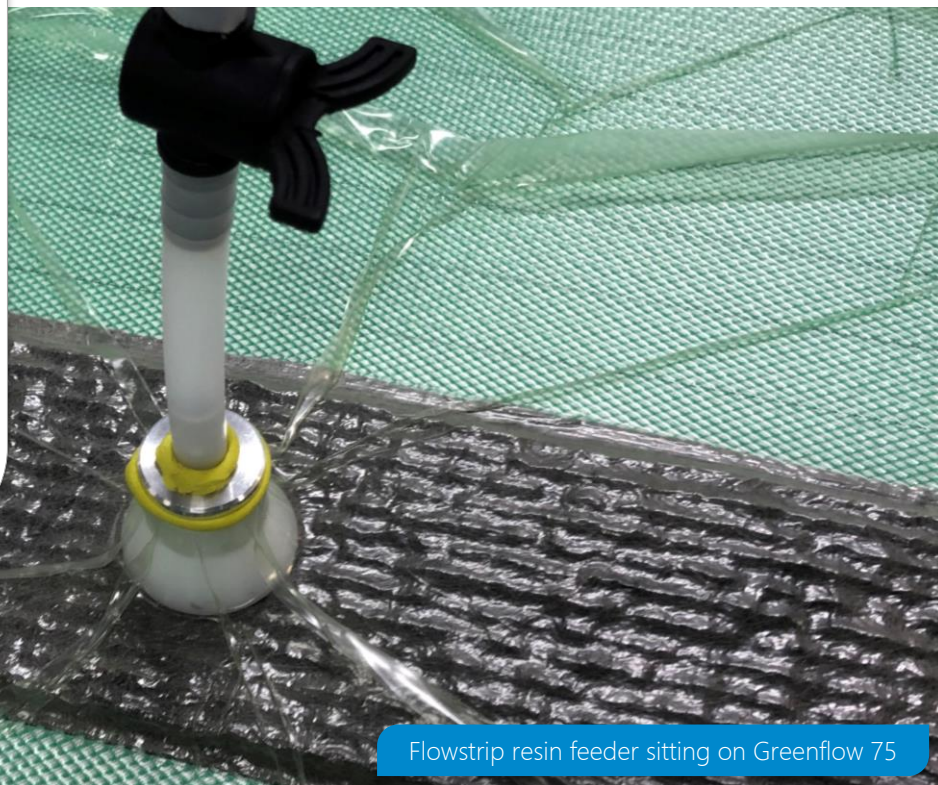


Benefits of resin flow mesh

- Resin flow mesh allows resin flow over the part surface so complete fibre wet out can be achieved before resin cure.
- Knitted mesh can be shaped more easily over curved part shapes.
- Extruded mesh cut without shedding.

Benefits of Airtech resin mesh

- GREENFLOW 75 retains less resin due to low profile so less resin waste, lower cost.
- GREENFLOW 75 now available in wider width for larger parts. Narrow slit width rolls can be made to order for smaller infusion part areas.
- KNITFLOW mesh is easily shaped over double curvature parts and delivers high resin flow speeds.
- COMBO-TECH combination technology from Airtech bonds flow mesh to release film, or peel ply, or both for much faster setups.
- FLOWSTRIP resin runner is easier and faster to setup than profile resin feeds.



Flowstrip resin feeder sitting on Greenflow 75

Greenflow 75

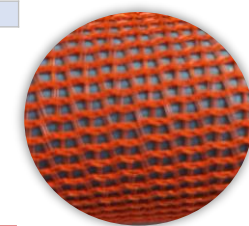
Low Resin Waste

Maximum Use Temperature	Mesh Weight	Material	Resin Flow Speed	Roll Sizes (Inches)	Roll Sizes (Metric)
150°C	98 g/m ²	Extruded PP	Medium	0.03" x 41" x 350 feet	0.9mm x 1.04m x 106m
Description				0.03" x 60" x 350 feet	0.9mm x 1.52m x 106m
Greenflow 75 will distribute resin with little waste due to the low profile, tight construction. Greenflow 75 can be used with polyester, vinyl ester and epoxy resins.					



Knitflow 160

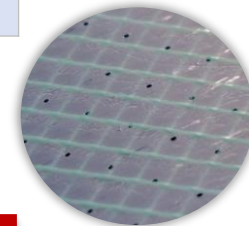
Maximum Use Temperature	Mesh Weight	Material	Resin Flow Speed	Roll Sizes (Inches)	Roll Sizes (Metric)
125°C	160 g/m ²	Knitted HDPE	High	0.059" x 59" x 328 feet	1.5mm x 1.5m x 100m
Description					
Knitflow 160 will flow resin over the part during the vacuum assisted resin infusion process. Works well with polyester, vinyl ester and epoxy resins. Knitflow 160 is a highly drapable knitted flow medium with a high resin flow speed for most resins.					



Flowlease 75-37P16 Combo-Tech

Big Time Savings

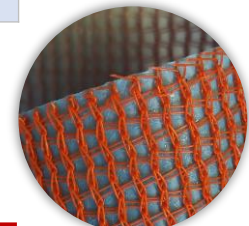
Maximum Use Temperature	Mesh Type	Release Type	Roll Sizes (Inches)	Roll Sizes (Metric)
121°C	Greenflow 75	WL3700P16	41" x 350 feet	1.04m x 107m
Description				60" x 345 feet
Flowlease combines flow mesh with perforated release film. Great labour savings can be achieved by having combination of products applied in one operation as opposed to applying one layer at a time.				



Flowlease 160-37P16 Combo-Tech

Big Time Savings

Maximum Use Temperature	Mesh Type	Release Type	Roll Sizes (Inches)	Roll Sizes (Metric)
121°C	Knitflow 160	WL3700P16	60" x 330 feet	1.52m x 100m
Description				
Flowlease combines flow mesh with perforated release film. Great labour savings can be achieved by having combination of products applied in one operation as opposed to applying one layer at a time.				



Flowpeel 160-37P16-ES Combo-Tech

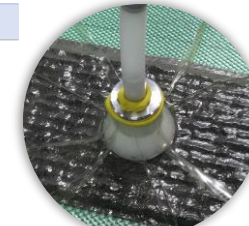
Big Time Savings

Maximum Use Temperature	Mesh Type	Release Type	Peel Ply	Roll Sizes (Inches)	Roll Sizes (Metric)
121°C	Knitflow 160	WL3700P16	Econostitch	60" x 330 feet	1.52m x 100m
Description					
Flowpeel combines flow mesh with perforated release film and peel ply fabric. Great labour savings can be achieved by having combination of products applied in one operation as opposed to applying one layer at a time.					



Flowstrip

Maximum Use Temperature	Material	Item	Roll Sizes (Inches)	Roll Sizes (Metric)
155°C	PP mesh in polyester sleeve	Flowstrip 2	2" x 27 yards	5cm x 25m
Description		Flowstrip 4	4" x 27 yards	10cm x 25m
Flowstrip is a lay flat resin feed channel constructed with a high speed 3D mesh inside a highly porous non-woven polyester sleeve. Flowstrip is an extremely efficient resin flow channel which is easy to position on infusion laminates and vacuum bag.				



Resin feed & vacuum manifolds

Draw vacuum and feed resin easily and efficiently

Dahlpac MC79 on stringer panel infusion

Benefits of feeders & manifolds

- Resin feed lines deliver resin evenly and quickly to fully wet-out dry fabrics stacks before the resin cures.
- Extruded & knitted flow lines are easier to position for faster and accurate setups.
- VacTrak is a self adhesive vac manifold for easier and faster setups.
- Dahlpac can apply vacuum on the part without resin loss for more complex and faster infusions.

Benefits of Airtech feeders & manifolds

- Omegaflow is available in multiple size options and a low cost vinyl rubber version. Omegaflow feeders are reusable.
- ResinTrak and VacTrak are the easiest feeders and manifolds to cut, position, hold and vacuum bag over.
- Dahltextx and Dahlpac can be used to draw air from complex shape part areas and to reduce resin waste.

Omegaflow resin feeders starting flow front

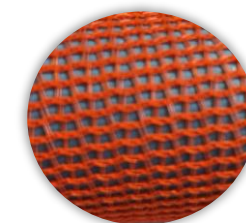
Flowlease 160-37P16 Strip

Low Cost Feed Line

Maximum Use Temperature	Mesh Type	Release Type	Roll Sizes (Inches)	Roll Sizes (Metric)
121°C	Knitflow 160	WL3700P16	4" x 350 feet	100mm x 107m

Description

Flowlease combines flow mesh with a layer of our perforated release film. Flowlease 160-37P16 Strip is 100mm wide and is used on the top of the carbon or fiberglass fabrics or on the top of the peel ply as a low cost resin feed line.



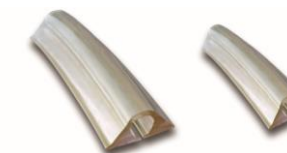
Omegaflow V

Low Cost Feed Line

Maximum Use Temperature	Material Type	Colour	Product Reference	Internal Diameter	Length
71°C	Vinyl Rubber	Clear	OF 625V	0.625" (16mm)	100 feet (30.5m)
			OF 750V	0.750" (19mm)	100 feet (30.5m)

Description

Omega Flow Lines have an "Omega section" internally to transport resin along the surface and into the part. Made from translucent vinyl rubber, they are reusable and sized for use with our polyethylene tubes. Airtech's Omega Flow Lines leave minimal or no mark off on the part when used in conjunction with Airtech's flow media and peel ply.



Omegaflow

Maximum Use Temperature	Material Type	Colour	Product Reference	Internal Diameter	Length
260°C	Silicone	Clear	OF 313	0.31" (8mm)	50 feet (15.2m)
			OF 500	0.50" (13mm)	50 feet (15.2m)
			OF 750	0.75" (19mm)	50 feet (15.2m)
			OF 1000	1" (25.4mm)	50 feet (15.2m)

Description

Omega Flow Lines have an "Omega section" internally to transport resin along the surface and into the part. Made from translucent silicone rubber, they are reusable and sized for use with our polyethylene tubes. Airtech's Omega Flow Lines leave minimal or no mark off on the part when used in conjunction with Airtech's flow media and peel ply.



ResinTrak & VacTrak

High Flexibility Option

Maximum Use Temperature	Material Type	Colour	Thickness	Width	Length
190°C	Polyester	White	3mm	43mm	25m

Description

A 100% polyester 3D knitted tape with very high permeability that can be used as a resin feeder or vacuum channel. ResinTrak version will transport resin along the part surface and into the laminate. ResinTrak leaves no mark off on the part when used in conjunction with Airtech's flow media and release ply. VacTrak version is supplied with a self adhesive side for sticking to tool flanges as a vacuum channel.

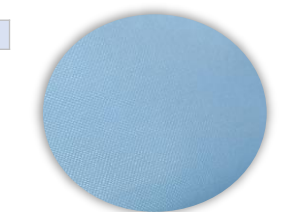


Dahltextx® SP-2

Maximum Use Temperature	Fibre Type	Colour	Weight	Roll Sizes (Inches)	Roll Sizes (Metric)
177°C	Coated Nylon	Light blue fabric side / White coated side	140 g/m²	58" x 164 yards	1.47m x 150m

Description

Dahltextx® SP-2 is an coated peel ply which has air permeability but does not allow resin bleed through. Dahltextx® SP-2 can be used to prevent resin bleed into vacuum manifolds to avoid loss of vacuum on part area. Blue fabric side has a release coating to allow easy removal off laminate surface. White side is not self releasing.



Dahlpac MC79

Less Resin Waste

Maximum Use Temperature	Material Type	Colour	Application	Roll Sizes (Inches)	Roll Sizes (Metric)
125°C	Nylon fabric & PP Mesh	Blue	Edge of part vac manifolds & part surface vacuum lines	4" x 27 yards	100mm x 25m

Description

Dahlpac MC79 is an easy to use strip material that allows vacuum to be applied over the surface of a composite laminate with no resin bleed out and little part mark-off. Dahlpac MC79 is constructed with Dahltextx® SP-2 fabric which breathes efficiently and can control resin flow.



Tubing and connectors



Benefits of tubing & connectors

- Spiral tubing forms an open channel for airflow in vacuum channels & resin flow in feed lines.
- Poly tubing is a cost effective option for vacuum and resin connections.
- Nylon fittings make plumbing quick, easy and secure.

Poly Tubing connected to vacuum bag



Benefits of Airtech fittings

- Complete one-stop shop for all tubing and connectors for infusion.
- Range of sizes for small, medium and large infusion projects.
- Fully compatible fittings for leak free setup from vacuum bag to resin trap and resin container.

Twin infusions ready to go

Infusion essentials for making infusions simple & efficient

Poly Spiral

Infusion Essential

Maximum Use Temperature	Material	Sizes (Inches)	Sizes (Metric)	Use with
121°C	Polyethylene			
Description		1/2" O.D. x 3/8" I.D. x 82'	12.7mm O.D. x 9.5mm I.D. x 25m	3/8" fittings
		3/4" O.D. x 5/8" I.D. x 82'	19mm O.D. x 15.8mm I.D. x 25m	1/2" fittings

Poly Tubing

Infusion Essential

Maximum Use Temperature	Material	Sizes (Inches)	Sizes (Metric)	Use with
121°C	Polyethylene tubing			
Description			10mm O.D. x 8mm I.D. x 30m	
			12mm O.D. x 10mm I.D. x 30m	3/8" fittings
			15mm O.D. x 12mm I.D. x 30m	1/2" fittings
		3/4" O.D. x 5/8" I.D. x 82'	19mm O.D. x 15.8mm I.D. x 25m	5/8" fittings

RB451 Vacuum catch pot

Infusion Essential

Description	Sizes (Gallons)	Sizes (Metric)	Use with
The RB 451 vacuum reservoir is designed to collect excess resin during the vacuum assisted resin transfer moulding process (VARTM). The RB 451 has 1 vacuum inlet and 3 resin inlets in order to be able to perform several infusions at the same time.	2.5 US Gallon Tank	10 litre	3/8", 1/2" & 5/8" fittings

Nylon Fittings

Maximum Use Temperature	Material	Type	Item	Sizes (Inches)
180°C	Nylon			
Description		Nylon Barb T Fitting	NTF38	3/8" x 3/8" x 3/8"
			NTF12	1/2" x 1/2" x 1/2"
			NTF58	5/8" x 5/8" x 5/8"
		Nylon Barb Elbow Fitting	NEF38	3/8" x 3/8"
			NEF12	1/2" x 1/2"
			NEF58	5/8" x 5/8"
		Nylon Barb Coupling Fitting	NCF38	3/8" x 3/8"
			NCF12	1/2" x 1/2"
			NCF58	5/8" x 5/8"
		Barb Fitting Infusion Valve	works with 1/2" O.D. Polyethylene tubing	

RIC - connector with spiral base

Maximum Use Temperature	Material	Tube Connection	Spiral Connection	Reference
80°C	UHMW Polyethylene			
Description		1/2"	1/2"	RIC 12
		5/8"	5/8"	RIC 58
		3/4"	3/4"	RIC 34

Vac-Ric LT - connector with flat base

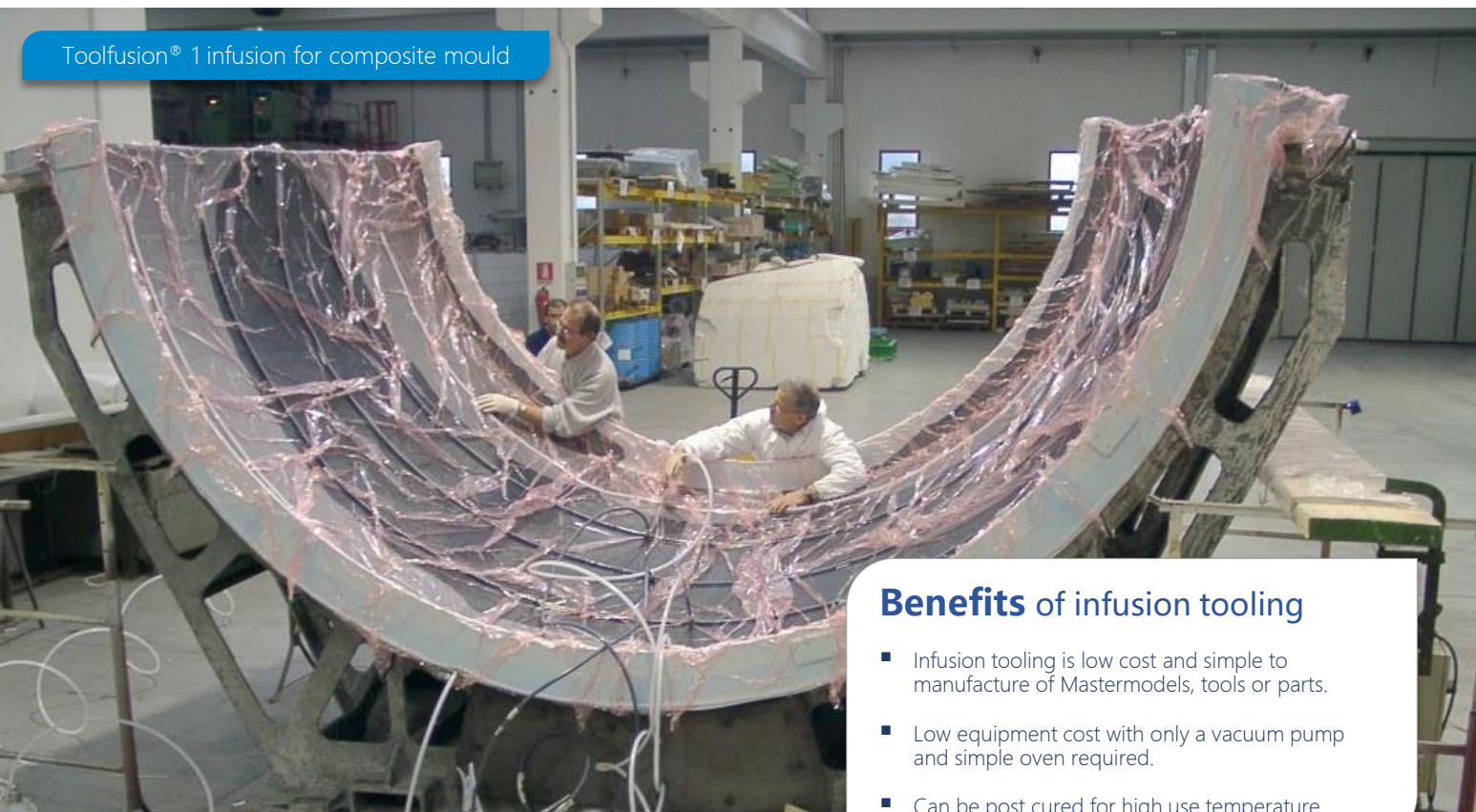
Maximum Use Temperature	Material	Tube Connection	Spiral Connection	Reference
80°C	UHMW Polyethylene			
Description		1/2"	Flat base	Vac-RIC LT 12
		5/8"	Flat base	Vac-RIC LT 58
		3/4"	Flat base	Vac-RIC LT 34



Infusion tooling & tools

Tools for infusing parts and resin for infusing mould tools

Toolfusion® 1 infusion for composite mould

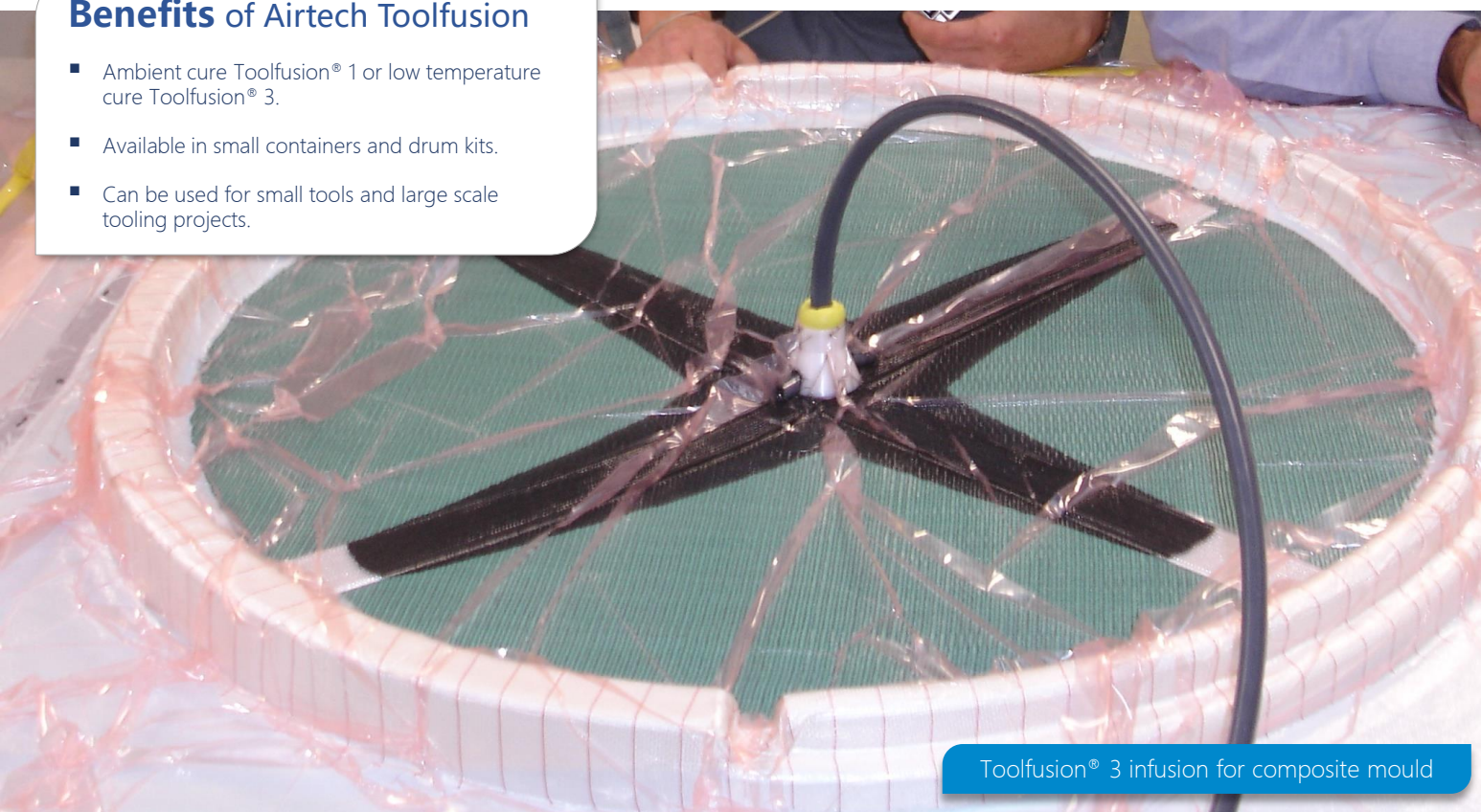


Benefits of infusion tooling

- Infusion tooling is low cost and simple to manufacture of Mastermodels, tools or parts.
- Low equipment cost with only a vacuum pump and simple oven required.
- Can be post cured for high use temperature.

Benefits of Airtech Toolfusion

- Ambient cure Toolfusion® 1 or low temperature cure Toolfusion® 3.
- Available in small containers and drum kits.
- Can be used for small tools and large scale tooling projects.



Toolfusion® 3 infusion for composite mould

Tac-Strip HT

Maximum Use Temperature	Material Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
100°C	Fibreglass mesh	High tack acrylic	White	1" x 295ft 2" x 295ft	2.5cm x 90m 5cm x 90m
Description Tac-Strip HT is a fibreglass fabric mesh tape coated on both sides with a "high-tack" pressure sensitive adhesive. Tac-Strip HT is designed to hold dry fabrics in place as required when using resin infusion, resin transfer moulding, and other processes requiring dry fabric lay-up. Tac-Strip HT has the added advantage of being very clean when compared to spray adhesives commonly used for ply placement.					



Airtac 2 LH – Low Hazard Spray Adhesive

Low Hazard

Spray style	Material Type	Characteristics	Colour	Can Size	Cans Per Case
Fine mist	Rubber based	Methylene chloride free, toluene free	Clear	500ml	12 cans / case
Description Airtac 2 LH is a spray adhesive designed for temporary bonding. Airtac 2 LH can be used to hold dry materials on contours and vertical surfaces. This product is ideally suited to resin infusion applications for holding plies, release films, peel plies, and infusion mesh in place until the vacuum bag is secured. Airtac 2 LH has a fine mist spray pattern.					



Airsweep

Description	Product Reference	Colour	Material	Length
Airsweep are laminating tools for laminating prepregs, lay-up of dry fabrics and positioning of vacuum bag materials into corner features.	Airsweep	White	HDPE	100mm
	Airsweep R2 (with handle)	White	UHMW PE	115mm
	Airsweep R3 (with handle)	Black	Nylon	115mm



Shop Shears

Description	Product Reference	Type	Length	Weight
Shop shears are lightweight and stronger than most all metal shears. The Shop shears have larger handles to reduce stress and thicker blades for heavy duty cutting. Shop shears are one of the hardest and smoothest cutting shears available, with approx. 60 HRC, hardened throughout.	SS-7205-8	Straight shears	200mm / 8"	150g
	SS-7230-9	Straight shears	230mm / 9"	170g
	SS-7250-10	Straight shears	250mm / 10"	210g
	SS-7280-11	Straight shears	280mm / 11"	248g
	SS-7300-12	Straight shears	310mm / 12"	306g



Resin Line Clamp

Infusion Essential

Description	Material Type	Plier Length	Flange Width
Resin line clamps are professional quality locking pliers for use in resin infusion applications. Hoses can be clamped separate from vacuum to prevent the flow of resin. These fully adjustable pliers have a nickel-plated finish and a non-slip grip, making for an ergonomic design.	Nickel plated style	21cm	8cm



Toolfusion® 1

Tooling Essential

Material Type	Initial Cure Temperature	Pot Life	Service Temperature	Package Size	Weight
Epoxy	22°C for 24 hours	75 minutes (100g at 22°C)	191°C	5 Gallon	Part A - 40 lbs. (18kg) Part B - 8 lbs. (3.6kg)
Description Toolfusion® 1A/ 1B is a two part, low viscosity epoxy infusion resin designed to produce prepreg quality, high temperature moulds at a fraction of the cost. Standard infusion vacuum bagging is all that is required to produce autoclave quality laminates. Toolfusion® 1A/ 1B requires room temperature master models and patterns further reducing the cost of composite tooling.				Drum	Part A - 500 lbs. (225kg) Part B - 105 lbs. (47.8kg)



Toolfusion® 3

Material Type	Initial Cure Temperature	Pot Life	Service Temperature	Package Size	Weight
Epoxy	49°C for 12 hours	300 minutes (100g at 22°C)	218°C	5 Gallon	Part A - 45 lbs. (20.4kg) Part B - 40 lbs. (18.1kg)
Description Toolfusion® 3 is a two part low viscosity epoxy infusion resin formulated to produce pre-preg quality, composite moulds. Toolfusion® 3 has a low initial cure temperature of 49°C and can be post cured to achieve a high glass transition temperature of 218°C. Void contents of less than 1% are achievable. Toolfusion® 3 will work in various RTM and VARTM processes including single and double bag arrangements to produce autoclave quality laminates.					



High temperature infusion

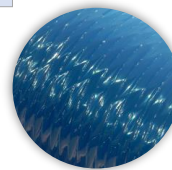


High temperature infusion setup

RF242B -1 perforated release film

Maximum Use Temperature	Elongation	Tensile Strength	Perforation Style	Roll Sizes (Inches)	Roll Sizes (Metric)
220°C	350%	48 MPa	RF242B -1 P3	0.0008" x 48" x 600 feet	0.020mm x 1.22m x 183m
Description					

RF242B-1 release film is a high temperature and high elongation release film which will conform easily to the most complex curvatures.



Airhold 1 CBS double sided tape

Maximum Use Temperature	Carrier Type	Adhesive Type	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
204°C	Polyester	Acrylic	Clear	1" x 36 yards	25mm x 33m
Description					

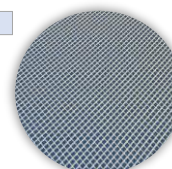
Airhold 1 CBS is an all-purpose, to hold release plies, release films and breathers in place during lay up and vacuum bagging machining operations. It leaves little residue which removes with common shop solvents.



Resinflow 90 HT resin flow mesh

Maximum Use Temperature	Mesh Weight	Material	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
177°C	160 g/m ²	Extruded nylon	Clear	0.035" x 40" x 500 feet	0.9mm x 1.01m x 152m
Description					

Resinflow 90 HT is a resin distribution medium for elevated temperatures. Resinflow 90 HT is designed for resin infusion with cures at 177°C. The fused overlay construction provides optimum flow characteristics.



Knitflow 105 HT resin flow mesh

Maximum Use Temperature	Mesh Weight	Material	Colour	Roll Sizes (Inches)	Roll Sizes (Metric)
200°C	105 g/m²	Knitted nylon	Clear	0.028" x 98" x 45.9 feet	0.7m x 2.5m x 40m
Description					

Knitflow 105 HT is designed to assist resin flow through the part during the vacuum assisted resin infusion process when elevated temperatures are used. Our resin flow medium works well with polyester, vinyl ester and epoxy resins. This product is a knitted flow medium.



High temperature infusion materials

Nylon Spiral

Maximum Use Temperature	Material	Colour	Sizes (Inches)	Sizes (Metric)
180°C	Nylon	White	1/2" O.D. x 3/8" I.D. x 82'	12.7mm O.D. x 9.5mm I.D. x 25m
Description				

Spiral tubing for resin feed lines and vacuum manifolds around part edge. Can be easily cut and connected with range of coupling, elbow and T fittings.



Nylon Tubing

Maximum Use Temperature	Material	Colour	Sizes (Inches)	Sizes (Metric)
180°C	Nylon	White	1/2" O.D. x 3/8" I.D. x 82'	12.7mm O.D. x 9.5mm I.D. x 25m
Description				

Tubing for resin feed and vacuum connections. Can be easily cut and connected with range of coupling, elbow and T fittings.



Siltube

Maximum Use Temperature	Material	Colour	Sizes (Metric)
230°C	Silicone	Clear	14 mm O.D. x 8 mm I.D. x 25 m – fits RIA1/2"
Description			18 mm O.D. x 10 mm I.D. x 25 m – fits RIA5/8"

Tubing for resin feed and vacuum connections. Can be easily cut and connected with range of coupling, elbow and T fittings.



RIC HT - connector with spiral base

Maximum Use Temperature	Material	Colour	Tube Connection	Spiral Connection	Product Reference
180°C	Nylon	Black	1/2"	1/2"	RIC-HT 12 RIC-HT 58 RIC-HT 34
Description			5/8"	5/8"	
			3/4"	3/4"	

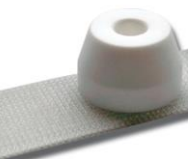
The Airtech Resin infusion connector (RIC) provides inexpensive and efficient through bag connection for use with spiral tube vacuum manifold and resin feed lines for low temperature resin infusion application.



VAC-RIC HT - connector with flat base

Maximum Use Temperature	Material	Colour	Tube Connection	Spiral Connection	Product Reference
260°C	PTFE	White	1/2"	1/2"	VAC-RIC HT 12
Description					

The Airtech Resin infusion Connector (RIC) provides inexpensive and efficient through bag connection for use with spiral tube vacuum manifold and resin feed lines for low temperature resin infusion application.



RIA - hose to connector adaptor

Maximum Use Temperature	Material	Colour	Tubing Connection Diameter	Fits Connector Size	Product Reference
260°C	Stainless Steel	Steel	9.8mm	1/2"	RIA 1/2" RIA 5/8" RIA 3/4"
Description			13.2mm	5/8"	
			15.2mm	3/4"	

RIA is a practical tool which can ensure the connection between the resin inlet tube or vacuum line and all Airtech RIC (Resin Infusion Connectors). The sharp angled end of this new adapter will easily perforate the vacuum bag placed on the top of the RIC without the need of scissors.



High temperature silicone tubing, Hose Clamp Mini, RIA and VAC-RIC HT

Tygavac customer service

Dedicated to the needs of our customers



Global manufacturing & Local Inventories
Delivering Short Lead Times. AAMG: >98% OTD



Customer Service
Team Contacts



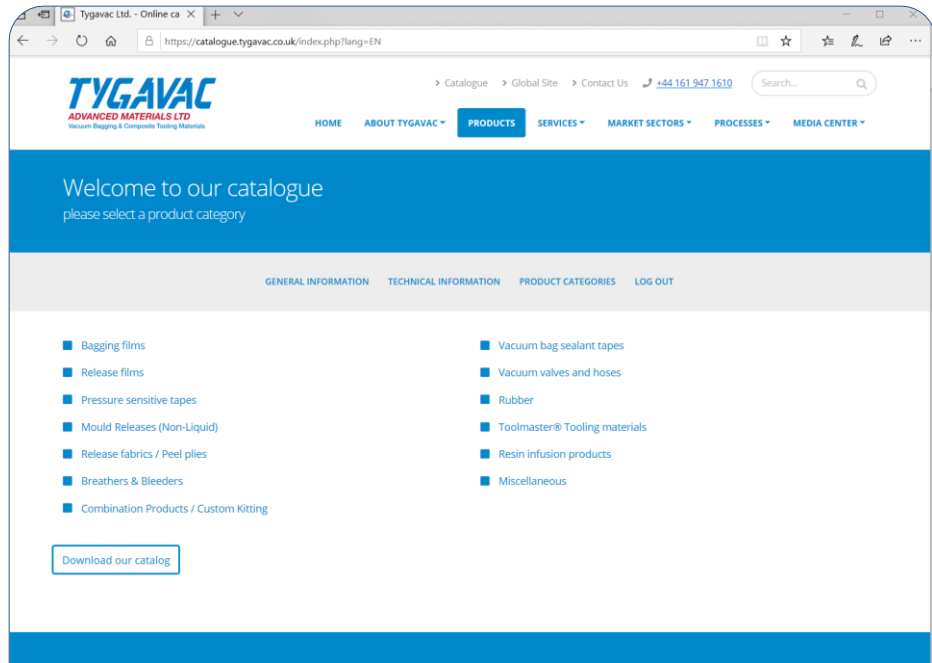
Development, Innovation &
Continuous Improvement



Technical Support, Training Workshop & On-site Training Support



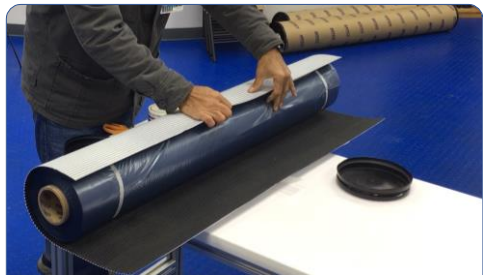
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Airtech has been a supplier and supporter of all forms of resin infusion processing from the early days of its development. We continue to develop new materials specifically for resin infusion using expertise developed in all composite industries such as Aerospace, Wind Energy, Marine, etc.

Doña Francisca Schooner

Image taken during the manufacture of the of the 52.5 metre Doña Francisca, one of the largest carbon sailing yachts ever built.



Company: Buquebus
Size: 52.5 metre
Launched: January, 2014
Location: Uruguay

172 feet carbon fibre boat infused using
Airtech materials by Loic Venec



Need more Information, a Quote or a Sample ?

Please contact our customer service team



Phone: +44 161 947 1610



Email: sales@tygavac.co.uk



About Tygavac

Chadderton, England

www.tygavac.co.uk

- Tygavac Ltd. is a division of Airtech Advanced Materials Group, the largest manufacturer of vacuum bagging and composite tooling materials for prepreg/autoclave, resin infusion, and wet lay-up processes up to 799°F (426°C). Our product line consists of: vacuum bagging films, release films, pressure sensitive tapes, mould releases (non-liquid), peel plies, breathers & bleeders, sealant tapes, vacuum bag connectors & hoses, rubber, pressure pads, cutting tools, vacuum leak detectors, shrink tape, PTFE coated fibreglass, tooling prepregs and resins, and carbon and glass reinforcements.
- Airtech Advanced Materials Group is family owned. We have six locations strategically placed worldwide: Huntington Beach, California, USA; Chino, California, USA; Springfield, Tennessee, USA; Differdange, Luxembourg; and Tianjin, China. All of our facilities offer technical assistance and are ready to meet your composite production challenges.
- Airtech is an ISO 9001:2015 / AS9100 Rev. D registered company.
- Thank you for your interest and feel free to contact us at any time.

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