

Resin infusion products

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Section Guide

RESIN INFUSION PRODUCTS

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Data Sheet

TOOLFUSION® 1A/1B

High temperature tooling infusion resin with room temperature initial cure

DESCRIPTION

Toolfusion® 1A/ 1B is a two part, low viscosity epoxy infusion resin designed to produce prepreg quality, high temperature molds 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.

TECHNICAL DATA

Material type Epoxy

Color Black: Amber (A:B)
Mix ratio by weight 100:20 (A:B)

Pot life 75 minutes (100 g at 72 °F or 22 °C)

Viscosity (mixed) 600 cps at 72 °F (22 °C) Density 0.042 lb/in 3 (1.15 g/cm 3)

Service temperature 375 °F (191 °C) Hardness 88 Shore D

Shelf life 12 months from date of shipment when stored in original packaging at 72°F (22°C)

SIZES

Packaging Part A	Packaging Part B	Weight Part A	Weight Part B
5 gallon	1 gallon	40 Lbs (18 Kg)	8 Lbs (3.6 Kg)
1 Drum	(3) x 5 gallons	500 Lbs (225 Kg)	(3) x 35 Lbs (15.9 Kg)

APPLICATION

Suggested initial cure:

- > Cure the laminate/ tool on the pattern under full vacuum at room temperature until resin has gelled. If the pattern is temperature capable, place in oven overnight at 140-150 °F (60-65 °C). Remove from oven and attach backup structure if required.
- > Demold from pattern and proceed with suggested post cure.

Room temperature cure for shop temperatures over 72° F (22 °C):

- > Cure the laminate/ tool to a pattern under full vacuum for a minimum of 24 hours. Attach proper backup structure (if required).
- > Carefully demold and place tool in cold oven and raise temperature to 100-120 °F (38-48 °C). Use a maximum of 3 °F (1.5 °C)/ minute for all heat up rates.
- > Dwell at this temperature for 4 hours then raise to 140-150 °F (60-65 °C).
- > Dwell at this temperature for 4 hours before continuing with suggested post cure.

Room temperature cure for shop temperatures under 72° F (22 °C):

- > Place pattern with laminate/ tool under full vacuum in an oven, or tent the pattern and use space heaters to raise the temperature to 80-100 °F (27-38 °C) and dwell overnight or 10 to 12 hours. Attach proper backup structure (if required).
- > Carefully demold laminate/ tool from pattern and place tool in cold oven and raise temperature to 100-120 $^{\circ}$ F (38-48 $^{\circ}$ C). Use a maximum of 3 $^{\circ}$ F (1.5 $^{\circ}$ C)/ minute for all heat up rates.
- > Dwell at this temperature for 4 hours then raise to 140-150 °F (60-65 °C).
- > Dwell at this temperature for 4 hours before continuing with suggested post cure.
- > Laminate/ mold achieves a complete room temperature cure in 5-7 days at a minimum temperature of 72 $^{\circ}$ F (22 $^{\circ}$ C).

Free standing post cure instructions (for use after initial cure):

> 2 hours at 200 °F (93 °C), 2 hours at 250 °F (121 °C), 2 hours at 300 °F (149 °C), 2 hours at 350 °F (177 °C), 2 hours at 375 °F (191 °C).

Note: Part A and Part B are sold separately. Volume per container is dependent on weight.

Last updated: 2018-09-28





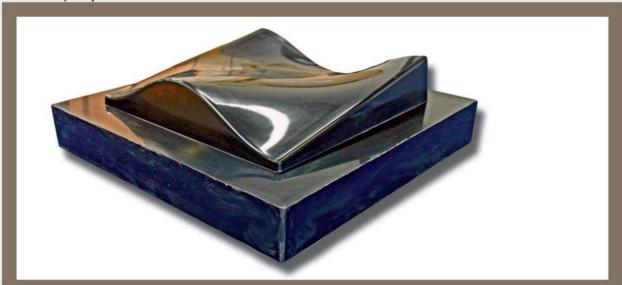
Data Sheet

TOOLFUSION® 3

High temperature infusion resin with low initial cure temperature

DESCRIPTION

Toolfusion® 3 is a two part low viscosity epoxy infusion resin formulated to produce pre-preg quality, composite molds. Toolfusion® 3 has a low initial cure temperature of 120 °F (49 °C) and can be post cured to achieve a high glass transition temperature of 425 °F (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.



BENEFITS

- > Resin infusion process delivers very high quality laminates with low manufacturing costs, no refrigeration costs, no autoclave running costs.
- > Low initial cure temperature for low thermal expansion effect during curing and ability to use low cost master model materials.
- > Nano technology delivers outstanding toughness & high Tg. (425 °F or 218 °C) for long tool life and reduced life cycle cost.
- > Low viscosity allows infusion of thicker and more complex laminates with fewer resin feed lines.
- > In comparison to metallic tools, Toolfusion® 3 composite tools are lighter weight for easier manual handing.
- > In comparison to metallic tooling, Toolfusion® 3 composite tools have faster heat up and cool down rates for reduced production costs.
- > Toolfusion® 3 composite tooling laminates have vacuum integrity for vacuum bag processing of parts in oven and autoclave.

Last updated: 2019-01-03





Data Sheet

TOOLFUSION® 3

High temperature infusion resin with low initial cure temperature

TECHNICAL DATA

Material type Epoxy

Color Black : Clear (A : B) Mix ratio by weight 100 : 85 (A : B)

Pot life 300 minutes (100 g at 72 °F or 22 °C) Viscosity (initial at 72 °F or 22 °C) 450 cps (initial at 72 °F or 22 °C)

Density 1.13 g/cm³
Glass transition temperature 425 °F (218 °C)
Hardness 89 Barcol
Shrinkage 0.9%

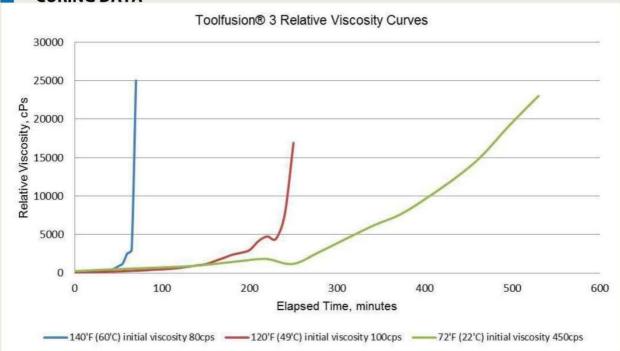
Shelf life 12 months from date of shipment when stored in

original packaging at 72°F (22°C)

SIZES

Packaging Part A	Packaging Part B	Weight Part A	Weight Part B
5 gallons	5 gallons	45 Lbs (20.4 Kg)	40 Lbs (18.1 Kg)

CURING DATA



Last updated: 2019-01-03





Data Sheet

TOOLFUSION® 3

High temperature infusion resin with low initial cure temperature

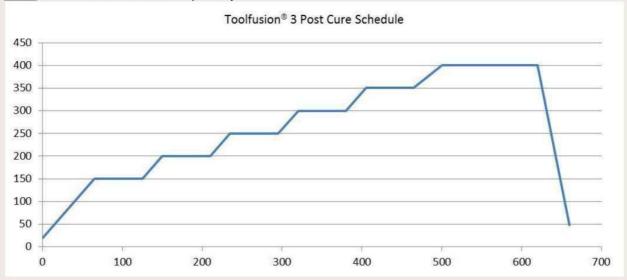
Initial cure:

- > Cure laminate on master model with full vacuum applied.
- > Raise temperature to 120 °F (49 °C) and hold for 12 hours.
- > Remove vacuum bagging materials and attach back-up structure if required.
- > Carefully remove the laminate continue with post cure.

Post cure schedule:

- > Ramp to 150 °F (65 °C) and hold for 60 minutes.
- > Ramp to 200 °F (93 °C) and hold for 60 minutes.
- > Ramp to 250 °F (121 °C) and hold for 60 minutes.
- > Ramp to 300 °F (149 °C) and hold for 60 minutes.
- > Ramp to 350 °F (177 °C) and hold for 60 minutes.
- > Ramp to 400 °F (204 °C) and hold for 120 minutes.

Note: Part A and Part B are sold separately.



Last updated : 2019-01-03





Data Sheet

INFUSIONCOAT® 1A/1B

Non-sagging, high temperature surface coat

DESCRIPTION

Infusioncoat® 1A/ 1B is a black surface coat designed for use with Toolfusion® 1A/ 1B tooling resin or other applications where a non-sagging surface coat is required. The product eliminates the need to use fabric tackifiers to hold the first ply on the pattern often resulting in minor surface defects.

TECHNICAL DATA

Material type Epoxy surface coat
Color Black: Amber (A:B)
Mix ratio by weight 100:11 (A:B)

Pot life 90-120 minutes (100 g at 72 $^{\circ}$ F or 22 $^{\circ}$ C) Tack free time 2-4 hours (100 g at 72 $^{\circ}$ F or 22 $^{\circ}$ C)

Service temperature 375 °F (191 °C)

Shelf life 12 months from date of shipment when stored in original packaging at 72 ° F (22 °C)

SIZES

Packaging Part A	Packaging Part B	Weight Part A	Weight Part B
1 gallon	1 quart	12 Lbs (5.44 Kg)	1.4 Lbs (0.63 Kg)

NOTES

> Please note that part A resins and part B hardeners are sold individually by US measurement container size shown above and are grouped for proper mix ratio. Volume per container will vary depending on product weight shown above. Metric conversions shown for container size above are for reference purposes only. > If crystallization occurs in part1A, please place container in oven with cover loosely placed on top at 160°F (71°C) for a minimum of 5 hours.

Last updated : 2018-11-14





Data Sheet

CARBON AND FIBERGLASS FABRICS

Fabrics for resin infusion and standard laminate tooling

Product name	Yarn type	Weaving style	Weight	Thickness	Roll sizes
TMGC 6000	3K Carbon	Plain	5.7 oz/yd² (198 g/m²)	0.012 in (0.30 mm)	50 in x 100 yd (127 cm x 91.4 m)
TMGC 6002T	3K Carbon	2x2 twill	5.7 oz/yd² (198 g/m²)	0.012 in (0.30 mm)	50 in x 100 yd (127 cm x 91.4 m)
TMGC 6001	6K Carbon	2x2 twill	10.5 oz/yd² (340 g/m²)	0.025 in (0.64 mm)	50 in x 100 yd (127 cm x 91.4 m)
TMGC 6003	12K Carbon	2x2 twill	19 oz/yd² (644 g/m²)	0.035 (0.89 mm)	50 in x 100 yd (127 cm x 91.4 m)
TMFC 7500	Fiberglass	Plain	9.6 oz/yd² (325 g/m²)	0.011 in (0.28 mm)	38 in x 125 yd (97 cm x 114.3 m)
TMFC 7544	Fiberglass	2 end plain	18.2 oz/yd² (617 g/m²)	0.022 in (0.56 mm)	38 in x 125 yd (97 cm x 114.3 m)
TMFC 7587	Fiberglass	Mock Leno	20.1 oz/yd² (681.5 g/m²)	0.027 in (0.69 mm)	38 in x 80 yd (97 cm x 73.1 m)

NOTE

- Other weights available upon request.
- · Minimum order quantity required.

Last updated: 2018-11-29





Data Sheet

RESINFLOW 60

Red extruded resin distribution medium

DESCRIPTION

Resinflow 60 is designed to assist resin flow through your part during the VARTM (Vacuum Assisted Resin Transfer Molding) process. Our resin distribution medium works well with polyester, vinylester and epoxy resins. Resin flows more easily throughout your lay-up, when using Resinflow 60.

TECHNICAL DATA

Material type LDPE/ HDPE blend

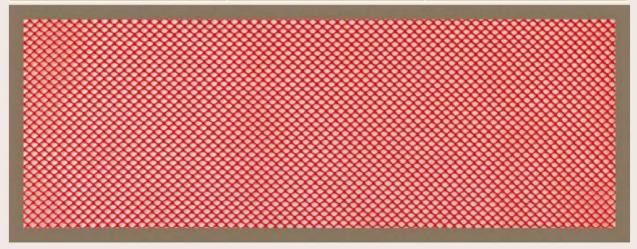
Color Red
Configuration of net Extruded
Maximum use temperature 212°F (100°C)

Mesh weight $4.72 \text{ oz/yd}^2 (160 \text{ g/m}^2)$

Shelf life Unlimited when stored in original packaging at 72°F (22°C)

SIZES

Thickness	Width	Length
0.050 in (1.3 mm)	60 in (1.52 m)	350 ft (107 m)
0.050 in (1.3 mm)	60 in (1.52 m)	175 ft (53.5 m)



NOTES

- This product does not fray when cut or roll up at the ends.
- The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, Airtech recommends testing prior to use.

Last updated: 2019-04-18





Data Sheet

GREENFLOW 75

High performance, low profile resin distribution medium

DESCRIPTION

Greenflow 75 is designed to efficiently distribute resin with little waste due to the low profile, tight construction. Greenflow 75 can be used with polyester, vinylester and epoxy resins.

TECHNICAL DATA

Material type Polypropylene

Color Green

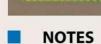
Configuration of net Extruded (Rhombic)
Maximum use temperature 302°F (150°C)

Maximum use temperature $302^{\circ}F (150^{\circ}C)$ Melt point $320^{\circ}F (161^{\circ}C)$ Mesh weight 98 g/m^2

Shelf life Unlimited when stored in original packaging at 72°F (22°C)

SIZES

Thickness	Width	Length
0.03 in (0.9 mm)	41 in (1.04 m)	350 ft (106.7 m)
0.03 in (0.9 mm)	60 in (1.5 m)	350 ft (106.7 m)



- This product is an extruded mesh and does not fray when cut.
- The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, Airtech recommends testing prior to use.

Last updated: 2019-04-23





Data Sheet

CARBON TRIAXIAL FABRICS

Performance fabrics for Toolfusion® Tooling

DESCRIPTION

Airtech TMGC-TX Fabrics are Triaxial Carbon Fabrics developed for the manufacture of composite molds with Airtech Toolfusion® resins. This range of Quasi-isotropic fabrics are balanced in every layer, avoiding the need for orientation of individual plies in laminate stack. TMGC-TX Fabrics are available in a selection of light, medium, and heavy weight fabrics. The heavy weight fabrics allow thickness to be built in fewer layers, with laminate quality for high quality post machining. Airtech TMGC-TX Fabrics deliver lower cost tooling solutions with superior performance.

BENEFITS

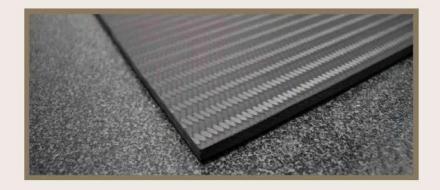
- Balanced fabrics do not require ply orientation, reducing layup times dramatically.
- · Simplified ply patterns reduces material waste to a minimum.
- Engineered for Toolfusion® for ease of infusion and high quality tooling laminates.

TECHNICAL DATA

Product Name	Yarn Type	Weaving Style	Weight	Thickness
TMGC-TX390	12K Carbon	Triaxial 0,+/-60°	11.6 oz/yd² (393 g/m²)	0.016 inch (0.41 mm)
TMGC-TX670	24K Carbon	Triaxial 0,+/-60°	19.5 oz/yd² (661 g/m²)	0.026 inch (0.66 mm)
TMGC-TX1100	24K Carbon	Triaxial 0.+/-60°	32.6 oz/yd² (1105 g/m²)	0.044 inch (1.13 mm)

SIZES

Product Name	Roll Sizes
TMGC-TX390	48 inches x 100 yd (122 cm x 91.4 m)
TMGC-TX670	48 in x 100 yd (122 cm x 91.4 m)
TMGC-TX1100	48 in x 30 yd (122 cm x 27.4 m)



NOTES

· Minimum order quantity may be required.

Last updated: 2017-10-24





Data Sheet

RESIN INFUSION AUXILIARY MATERIALS

Tubing, spiral tubing and fittings

Room temperature - 250 °F (121 °C)	
LDPE tubing:	1/2" O.D. x 3/8" I.D. x 100 ft (use with 3/8" fittings)
	5/8" O.D. x 1/2" I.D. x 100 ft (use with 1/2" fittings)
	3/4" O.D. x 5/8" I.D. x 100 ft (use with 5/8" fittings)
LDPE spiral tubing:	3/8" O.D. x 1/4" I.D. x 100 ft
	1/2" O.D. x 3/8" I.D. x 100 ft (use with 3/8" fittings)
	5/8" O.D. x 1/2" I.D. x 100 ft (use with 1/2" fittings)
	3/4" O.D. x 5/8" I.D. x 100 ft (use with 5/8" fittings)

Room temperature - 356 °F (180 °C)	
HTRIL - S59 - Translucent silicone tubing:	3/4" O.D. x 3/8" I.D. x 100 feet
	7/8" O.D. x 1/2" I.D. x 100 feet
FIT-55 - Glass vacuum manifold tape:	0.050" x 1.0" x 540 feet
NTF - Nylon barb "T" fittings:	NTF 38 - 3/8" x 3/8" x 3/8"
	NTF 12 - 1/2" x 1/2" x 1/2"
	NTF 58 - 5/8" x 5/8" x 5/8"
NEF - Nylon barb elbow fittings:	NEF 38 - 3/8" x 3/8"
	NEF 12 - 1/2" x 1/2"
	NEF 58 - 5/8" x 5/8"
NCF - Nylon barb coupling fittings:	NCF 38 - 3/8" x 3/8"
	NCF 12 - 1/2" x 1/2"
	NCF 58 - 5/8" x 5/8"



Last updated: 2019-04-18





Data Sheet

RESINFLOW 90 HT

Clear high temperature resin distribution medium

DESCRIPTION

Resin distribution medium for elevated temperatures. Resinflow 90 HT is designed for resin infusion with cures at 350 °F (177 °C). The fused overlay construction provides optimum flow characteristics.

TECHNICAL DATA

Material type Nylon Color Clear

Configuration of net Extruded (Rhombic) Maximum use temperature $350 \,^{\circ}\text{F} \, (177 \,^{\circ}\text{C})$ Melt point $425 \,^{\circ}\text{F} \, (218 \,^{\circ}\text{C})$

Shelf life Unlimited when stored in original packaging at 72°F (22°C)

SIZES

Thickness	Width	Length
0.035 in (0.9 mm)	40 in (1.01 m)	500 ft (152 m)
~~~	******	********
***************************************		

#### NOTES

- This product is an extruded mesh and does not fray when cut.
- The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, Airtech recommends testing prior to use.

Last updated: 2019-04-18





**Data Sheet** 

# FLOWLEASE 75-37P16

## Combined product

#### DESCRIPTION

Flowlease 75-37P16 combines Greenflow 75 flow mesh with a layer of our perforated release film Wrightlon® 3700 P16 and is intended to be used in resin infusion applications. The mesh is designed to efficiently distribute resin with little waste due to the low profile and tight construction. A high resin infusion flow can be achieved with most resin types. Great labor savings can be achieved by having combination of products applied in one operation as opposed to applying one layer at a time. Flowlease 75-37P16 will be applied on the top of the carbon or fiberglass fabrics or on the top of the peel ply.

## ■ TECHNICAL DATA

Maximum use temperature 250°F (121°C)

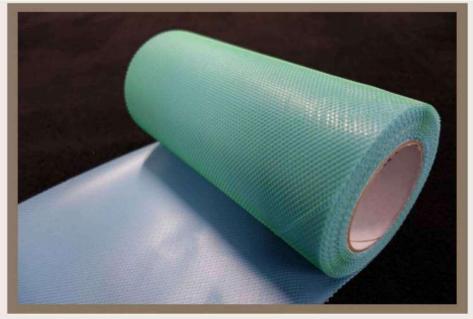
**Technical data - Film** 

 $\begin{array}{lll} \text{Material type} & \text{Polyolefin} \\ \text{Thickness} & 0.001 \text{ inch } (25 \, \mu) \\ \text{Color} & \text{Blue} \\ \text{Perforation style} & \text{P16} \end{array}$ 

**Technical data - Flow mesh** 

 $\begin{array}{lll} \text{Material type} & \text{Polypropylene} \\ \text{Configuration of net} & \text{Extruded} \\ \text{Mesh weight} & 4 \, \text{oz/yd}^2 \, (98 \, \text{g/m}^2) \\ \text{Color} & \text{Green} \end{array}$ 

Width	Length	
41 inches (1.04 m)	350 feet (107 m)	
60 inches (1.52 m)	345 feet (105 m)	



#### NOTES

- This product is an extruded net and does not fray when cut.
- Other combination available upon your detailed request, see Combo-Tech data sheet.
- The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, Airtech recommends testing prior to use.
   Last updated: 2019-04-18





**Data Sheet** 

# OF313, OF500, OF750 & OF1000

## Silicone rubber omega flow lines

#### DESCRIPTION

Airtech's Omega Flow Lines are for use under the bag in single or double bag resin infusion applications, replacing spiral wrap polyethylene feeder lines. Omega Flow Lines incorporate an "Omega section" internally to transport resin along the surface and into the part. Omega Flow Lines are made from translucent silicone rubber and are reusable.

Four sizes are available with internal diameters of 0.31 in (8 mm), 0.50 in (13 mm), 0.75 in (19 mm) and 1 in (25.4 mm), suitable for use with common size 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.

#### TECHNICAL DATA

Material type Silicone rubber Color Clear Service temperature 500 °F (260 °C)

#### SIZES

Product reference	Internal Diameter	Length
OF 313	0.31 inch (8 mm)	50 feet (15.2 m)
OF 500	0.50 inch (13 mm)	50 feet (15.2 m)
OF 750	0.75 inch (19 mm)	50 feet (15.2 m)
OF 1000	1 inch (25.4 mm)	50 feet (15.2 m)



#### NOTES

- > Omega Flow Lines are reusable with proper care.
- > Product is recommended to be treated with compatible release to maximize lifespan.

Last updated: 2019-04-18





## **Data Sheet**

# OF 625V & 750V

# Vinyl omega flow lines

#### DESCRIPTION

As with Airtech's Omega Flow Lines, OF 625V and OF 750V are also for use under the bag in single and double bag resin infusion applications, replacing spiral wrap polyethylene feeder lines. OF 625V and OF 750V are low cost, reusable, and made from translucent vinyl rubber.

Two sizes are available with internal diameters 0.625 in (16 mm) and 0.750 in (19 mm), suitable for use with common size 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.

### **TECHNICAL DATA**

Material type Vinyl rubber
Color Clear
Service temperature 161 °F (71 °C)

#### SIZES

Product reference	Internal Diameter	Length
OF 625V	0.625 inch (16 mm)	100 feet (30.5 m)
OF 750V	0.750 inch (19 mm)	100 feet (30.5 m)



#### NOTES

Vinyl Omega Flow Lines can be warmed to 120 °F (50 °C) to aid in conforming to contoured surfaces.

Last updated : 2019-04-18





# **Data Sheet**

# **DAHLPAC MC79-1**

## Vacuum breather pad with zero resin bleed for resin infusions

#### 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 Dahltexx SP-2 fabric which breathes efficiently and can control resin flow.

#### **Benefits:**

- > Ensure complete resin wet out and avoid dry patches by achieving efficient total air removal with vacuum distribution over the part surface.
- > Speed up infusions with multiple resin feeds and avoid dryness where flow fronts meet.
- > Infuse up stringer profiles and avoid dry patches with stringer top vacuum manifolds.
- > Simplify vacuum bagging, saving time and reduce resin waste.

### TECHNICAL DATA

Material type Color Maximum use temperature Materials to avoid Dahltexx SP-2 fabric and breather mesh Blue 255 °F (125 °C) Compatible with most resins

### SIZES

Width
4.5 inches (11.4 cm)
80 feet (24.3 m)

### NOTES

Wider widths available on request. Minimum order required.

Last updated : 2019-04-18





# **Data Sheet**

# **VAC-RIC HT**

# High temperature resin infusion connector with flat base

#### DESCRIPTION

The Airtech high temperature resin infusion connector with a flat base VAC-RIC HT provides inexpensive and efficient through bag connection for vacuum manifold and resin feed lines for high temperature resin infusion applications. It is suitable for use with the Dahlpac MC79 vacuum breather pad.

### TECHNICAL DATA

Material type Maximum use temperature Color PTFE 500 °F (260 °C) White

### SIZES

Product reference	Tube connection	Spiral tube connection
VAC-RIC HT	1/2 inch	1/2 inch

### NOTES

- > Cut the Airtech nylon tube on angle and apply wrap of vacuum sealant tape above cut.
- > Apply bag film over VAC-RIC HT and pierce film with angled tube until vacuum sealant seals connection.
- > For any use with a spiral tube, it is recommended to use the 'RIC HT' with the channel through the connector base.

Last updated: 2019-04-18





# **Data Sheet**

# **VAC-RIC LT**

## Low temperature resin infusion connector with flat base

#### DESCRIPTION

The Airtech Resin infusion connector with a flat base VAC-RIC LT provides inexpensive and efficient through bag connection for vacuum manifold and resin feed lines for low temperature resin infusion applications. It is suitable for use with the Dahlpac MC79 vacuum breather pad.

### TECHNICAL DATA

Material type PE
Maximum use temperature 176 °F (80 °C)
Color White

#### SIZES

Product reference	Tube connection	Spiral tube connection
VAC-RIC LT 12	1/2 inch	1/2 inch
VAC-RIC LT 58	5/8 inch	5/8 inch
VAC-RIC LT 34	3/4 inch	3/4 inch



### NOTES

- > Select RIC to fit tube and spiral employed and position as desired, then complete vacuum bag.
- > Cut polyethylene tube on angle and apply wrap of vacuum sealant tape above cut.
- > Apply bag film over RIC and pierce film with angled tube until vacuum sealant seals connection.
- > For any use with a spiral tube, it is recommended to use the 'RIC' with the channel through the connector base.

Last updated : 2019-04-18





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RIC

## **Data Sheet**

# Inexpensive resin infusion connector

#### DESCRIPTION

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

### **TECHNICAL DATA**

Material type Polyethylene UHMW Maximum use temperature 176 °F (80 °C)

#### SIZES

Product reference	Tube connection	Spiral tube connection
RIC 12	1/2 inch	1/2 inch
RIC 58	5/8 inch	5/8 inch
RIC 34	3/4 inch	3/4 inch



#### **NOTES**

- > Select RIC to fit tube and spiral employed and position as desired, then complete vacuum bag.
- > Cut polyethylene tube on angle and apply wrap of vacuum sealant tape above cut.
- > Smooth bag film over RIC and pierce film with angled tube until vacuum sealant seals connection.

Last updated: 2019-04-18





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Vacuum reservoir for resin infusion

**RB 451** 

# **Data Sheet**

DESCRIPTION The RB 451 vacuum reservoir is designed to collect excess resin during the vacuum assisted resin transfer

molding process (VARTM). The RB 451 has 1 vacuum inlet and 1 outlet port. Multiple fittings are included. The unit comes equipped with a vacuum regulator/ gauge for reduced vacuum and leak detection applications. By disconnecting the vacuum source, one can view the gauge for signs of decreasing vacuum, ie., leaks.

Additionally, each unit includes:

> A polypropylene bucket to collect the resin without damaging the tank inside.

> An AQD 500BF Quick Disconnect 1/4" Male NPT to be mounted on the tank vacuum source.

> 1/2" barbed fitting (5/8" I.D. hose)

> 5/8" barbed fitting (3/4" I.D. hose)

### **TECHNICAL DATA**

Resin inlet

2.5 gallons (10 liters) Tank size 12 inches (30 cm) Tank diameter Tank height, with the handle 18 inches (46 cm)

Vacuum source Barbed fitting 3/8 inch diameter

Barbed fitting 1/2 inch diameter or 5/8 inch diameter

122 °F (50 °C) Maximum service temperature



Last updated: 2017-06-26





## **Data Sheet**

# **RESIN LINE CLAMP**

## Flanged locking plier

#### DESCRIPTION

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.

### TECHNICAL DATA

Material type Plier length Flange width Thickness at flange Nickel plated steel 8 in (21 cm) 3 in (8 cm) 1/8 in (0.3 cm)



Last updated : 2016-02-04





**Data Sheet** 

# **AIRTAC 2**

# Spray contact adhesive for temporary bonding

#### DESCRIPTION

Airtac 2 is a spray rubber adhesive designed for temporary bonds. Airtac 2 can be used on materials needing extra tack for placement on vertical or difficult surface areas. This product is ideally suited for tool shop applications such as temporary placement of details and pattern fabrication. Resin infusion process rely on Airtac 2 for holding plies in place until resin infusion is completed.

#### TECHNICAL DATA

Solvent characteristics

Shelf life

Non CFC 12 months from date of shipment when stored at 72 °F (22 °C)

#### SIZES

Packaging Type	Content Weight
12 cans per case	16.75 oz (474 g)

#### APPLICATION

- Make sure spray distance to the part is minimum 12 in (30 cm).
- After spraying Airtac 2, wait at least 10 seconds to give solvent the possibility to evaporate.



### NOTES

- · Not for sale in California
- · Consult SDS prior to use.

Last updated: 2018-10-23





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## Data Sheet

# **AIRTAC 3**

## Spray adhesive for temporary bonding

#### DESCRIPTION

Airtac 3 is a spray adhesive designed for temporary bonding. Airtac 3 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 3 has a fine pebble spray pattern which reduces airborne material. This reduces overspray and user exposure.

#### BENEFITS

- · Excellent tack holds dry materials for faster vacuum bagging.
- More accurate material placement for infusion setups and better quality laminates.
- Less toxic and less airborne material with pebble spray pattern for safer application.

### TECHNICAL DATA

Characteristics Shelf life

Methylene chloride free, hexane free, toluene free 12 months from date of shipment when stored at 72°F (22°C)

### SIZES

Packaging Type Content 16.9 fl oz (500 ml) 12 cans per case



#### APPLICATION

- Product can be applied to one or to both bonding surfaces. Ensure surfaces are clean and free of FOD, grease, oil, wax, etc. For best results surfaces should be between 50 - 86°F (10 - 30°C).
- · Use with adequate ventilation. Shake aerosol well before use. Read SDS information and understand before use.
- Spray 6 10 inches (15 25 cm) away from the surface at 90° to the surface, applying an even coat. Allow the adhesive to tack off until there is no transfer when touched.
- · Join surface and press firmly together.

#### NOTES

- Consult SDS prior to use. Do not store at temperatures over 122°F (50°C). Avoid exposure to sunlight. Do not store directly on concrete floor.
- Air Trigger sold separately.
- Airtac 3 Canister, a low voc California compliant version is available in 3.6 gallon (13.7 liter) canister. Contact Airtech for more information.
- Not for sale in CA, IL, IN, MI, OH, CT, DE, UT, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, DC. Last updated: 2018-07-05

**Data Sheet** 

# **RESIN INFUSION STARTER KIT**

Starter kit for resin infusion technology

#### DESCRIPTION

The resin infusion starter kit is made for beginners in the resin infusion technology. All necessary materials are included, excluding a vacuum pump. The resin infusion starter kit will enable you to make your first composite part using the resin infusion technology in a short period of time. The provided material will allow you to make a part superior to 2 sqm. Furthermore, our CD will give you all necessary working instructions and details. For more information, please visit: www.resininfusion.com

ltem	Product name	Description	Quantity
1	CD	Instructional video, SDS & Data sheets	1
2	CD	Basic guide to vacuum bagging (Powerpoint)	1
3	RB 451	Vacuum reservoir	1
4	1/2" Polyethylene tubing	Tubing	50 ft (25 m)
5	1/2" Polyethylene spiral tubing	Spiral tubing	50 ft (25 m)
6	OF 625V	Resin infusion line	10 ft (3 m)
7	NTF-38	3/8" x 3/8" Nylon barb "T" fittings	6
8	NEF-38	3/8" x 3/8" Nylon barb elbow fittings	6
9	Greenflow 75	Resin distribution medium	41" x 20'
10	Tac-Strip	Adhesive coated fiberglass tape	1 roll
11	KM 1300	Vacuum bagging film	0.002" x 60" x 20'
12	Bleeder Lease® B	Release coated peel ply	60" x 15'
13	AT-200Y	Vacuum bag sealant tape	6 rolls
14	Econobreaker 2R	1" wide hold down tape	1 roll
15	Airhold 10 CBS	1" wide double back tape	1 roll
16	Resin Line Clamps	Resin feed line clamp	3
17	RIC12	1/2" resin infusion connector	1
18	5 gallon (10 liter) pail	Resin reservoir	1



Last updated: 2017-04-13





# **Data Sheet**

# **ECONOTAC 2**

# Economical contact spray adhesive

#### DESCRIPTION

Econotac 2 is an economical rubber based contact spray adhesive, designed for temporary bonding applications. Econotac 2 can be used to hold dry fabric, core and processing materials in place when utilizing resin infusion and other composite fabrication processes. Econotac 2 has a wide conical spray pattern for increased coverage.

#### TECHNICAL DATA

Solvent characteristics

Adhesive type

Shelf life

Non CFC

Rubber

12 months from date of shipment

SIZES

Packaging Type	Content Weight
12 cans per case	17 oz (482 g)

when stored at 72 °F (22 °C)

#### APPLICATION

- Make sure spray distance to the part is minimum 12 in (30 cm).
- After spraying Econotac 2, wait at least 10 seconds to give solvent the possibility to evaporate.
- Material safety data sheet should be read and understood prior to use this product.



### NOTES

· Not for sale in California.

Last updated : 2018-11-01





**Data Sheet** 

# TAC-STRIP

## Dry fabric placement tape

#### DESCRIPTION

Tac-Strip is a fiberglass fabric mesh tape coated on both sides with a "high-tack" pressure sensitive adhesive. Tac-Strip is designed to hold dry fabrics in place as required when using resin infusion, resin transfer molding, and other processes requiring dry fabric lay-up. Tac-Strip has the added advantage of being very clean when compared to spray adhesives commonly used for ply placement.

#### ■ TECHNICAL DATA

Material type Fiberglass mesh

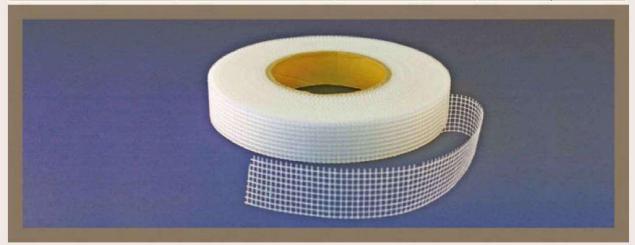
Adhesive type Acrylic Color White

Maximum use temperature 212 °F (100 °C)

Shelf life 12 months from date of shipment when stored in original packaging at 72 °F (22 °C)

#### SIZES

Thickness	Width	Length	Packaging size
0.008 inch (0.2 mm)	1 inch (2.54 cm)	295 feet (90 m)	54 rolls per case
0.008 inch (0.2 mm)	2 inches (5.08 cm)	295 feet (90 m)	24 rolls per case



#### NOTES

- Tac-Strip is an environmental friendly product which can be used instead of spray adhesives.
- The maximum use temperature is dependent upon the duration at maximum temperature and is process specific, Airtech recommends testing prior to use.

Last updated: 2019-04-18