



PRODUCT BULLETIN

First Surface Aluminum Coated Polyimide Tape with Acrylic 3M™966 Adhesive

Sheldahl® Brand Materials first surface aluminized polyimide tape with acrylic 3M™ 966 adhesive is used whenever a low emittance and low solar absorptance surface is needed. The acrylic 3M™ 966 adhesive is nominally 2.3 mils thick, provides a strong bond with low outgassing, and can be used over a moderate temperature range. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, or 2 mil thick polyimide that conforms to the requirements of ASTM D-5213. The aluminum coating is nominally 1000 Å thick. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in any width needed. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Solar absorptance (α)	≤ 0.14
Hemispherical emittance (ϵ_H)	≤ 0.035
Normal emittance (ϵ_N)	≤ 0.035
Typical α/ϵ	4 - 5
Adhesion to stainless steel	≥ 20 oz./inch of width
Intermittent temperature range	-185° C to 230° C (-300° F to 450° F) ^A
Continuous temperature range	-60° C to 120° C (-75° F to 250° F) ^A

^A Zero peel strength of acrylic pressure sensitive adhesive is at about -45° C (-50° F).

Standard Item Number	Thickness mil (μm)	Typical Weight (g/m^2)	Perforation Item Number
146390	0.5 (12.5)	81	TBD
146385	1.0 (25)	98	146386
146389	2.0 (51)	133	166722



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after metalizing and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

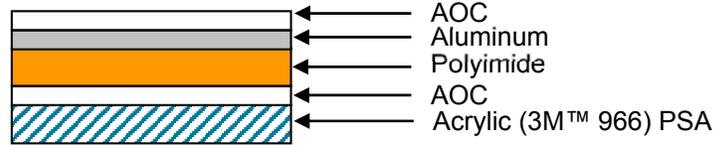
The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G401060	146390	0.5 mil	G401061	TBD
G401000	146385	1.0 mil	G401001	146386
G401020	146389	2.0 mil	G401021	166722

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.



PRODUCT BULLETIN

First Surface Aluminized Polyimide Tape with AOC and Acrylic 3M™ 966 Adhesive

Sheldahl® Brand Materials first surface aluminized polyimide tapes with AOC and acrylic 3M™ 966 adhesive are used whenever low emittance and low absorptance surfaces are needed. The acrylic 3M™966 adhesive is nominally 2.3 mils thick, provides a strong bond with low outgassing, and can be used over a moderate temperature range. The acrylic overcoat provides additional resistance to humidity and salt fog, as may be found at most launch sites. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, or 2 mil thick polyimide that conforms to the requirements of ASTM D-5213. The aluminum coating is nominally 1000 Å thick. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in any width needed. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Absorptance (α)	≤ 0.14
Hemispherical emittance (ϵ_H)	≤ 0.05
Normal emittance (ϵ_N)	≤ 0.05
Typical α/ϵ	3 - 5
Adhesion to stainless steel	≥ 20 oz./inch of width
Intermittent temperature range	-185° C to 230° C (-300° F to 450° F) ^A
Continuous temperature range	-60° C to 120° C (-75° F to 250° F) ^A

^A Zero peel strength of acrylic pressure sensitive adhesive is at about -45°C (-50°F).

Standard Item Number	Thickness mil (μm)	Typical Weight (g/m^2)	Perforation Item Number
146572	0.5 (12.5)	81	TBD
146570	1.0 (25)	98	TBD
146571	2.0 (51)	133	TBD

TAPES



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after metalizing and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

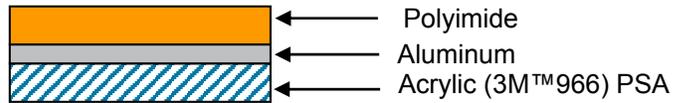
SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G411710	146570	1.0 mil	G411711	TBD
G411720	146571	2.0 mil	G411721	TBD
G411760	146572	0.5 mil	G411761	TBD

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.

PRODUCT BULLETIN



Second Surface Aluminum Coated Polyimide Tape with Acrylic 3M™966 Adhesive

Sheldahl® Brand Materials second surface aluminized polyimide tapes with acrylic 3M™ 966 adhesive are used whenever moderate emittance and solar absorptance are needed. The acrylic 3M™ 966 adhesive is nominally 2.3 mils thick, provides a strong bond with low outgassing, and can be used over a moderate temperature range. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, 2, 3, or 5 mil thick polyimide that conforms to the requirements of ASTM D-5213. The aluminum coating is nominally 1000 Å thick. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in any width needed. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Adhesion to stainless steel (substrate ≥ 1 mil)	≥ 25 oz./inch of width
Intermittent temperature range	-185° C to 230° C (-300° F to 450° F) ^A
Continuous temperature range	-60° C to 120° C (-75° F to 250° F) ^A

^A Zero peel strength of acrylic pressure sensitive adhesive is at about -45°C (-50°F)

Standard Item Number	Thickness mil (μm)	Second Surface Mirror Properties			Typical Weight (g/m ²)	Perforation Item Number
		α	εN	εH		
146528	0.5 (12.5)	≤ 0.36	≥ 0.50	≥ 0.52	81	TBD
146520	1.0 (25)	≤ 0.39	≥ 0.62	≥ 0.64	98	146521
146522	2.0 (51)	≤ 0.44	≥ 0.71	≥ 0.71	133	TBD
146524	3.0 (76)	≤ 0.46	≥ 0.77	≥ 0.77	171	146525
146527	5.0 (127)	≤ 0.49	≥ 0.81	≥ 0.81	243	TBD



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after metalizing and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

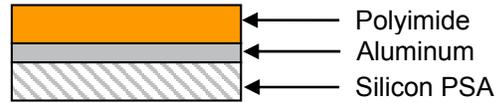
SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G408860	146528	0.5 mil	G408861	TBD
G408810	146520	1.0 mil	G408811	146521
G408820	146522	2.0 mil	G408821	TBD
G408830	146524	3.0 mil	G408831	146525
G408850	146527	5.0 mil	G408851	TBD

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.

PRODUCT BULLETIN



Second Surface Aluminum Coated Polyimide Tape with Silicon Adhesive

Sheldahl® Brand Materials second surface aluminized polyimide tapes with Silicon adhesive are used whenever moderate emittance and absorptance are needed. The Silicon adhesive is nominally 1 mil thick, provides a strong bond with moderate outgassing, and can be used over a wide temperature range. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, 2, 3, or 5 mil thick polyimide that conforms to the requirements of ASTM D-5213. The aluminum coating is nominally 1000 Å thick. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in widths up to 26 inches. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Adhesion to stainless steel	≥ 10 oz./inch of width
Intermittent temperature range	-185° C to 260° C (-300° F to 500° F)
Continuous temperature range	-185° C to 150° C (-300° F to 300° F)

Standard Item Number	Thickness mil (µm)	Second Surface Mirror Properties			Typical Weight (g/m ²)	Perforation Item Number
		α	εN	εH		
146493	0.5 (12.5)	≤ 0.36	≥ 0.50	≥ 0.52	54	TBD
146490	1.0 (25)	≤ 0.39	≥ 0.62	≥ 0.64	71	146491
146492	2.0 (51)	≤ 0.44	≥ 0.71	≥ 0.71	107	TBD
TBD	3.0 (76)	≤ 0.46	≥ 0.77	≥ 0.77	144	TBD
161598	5.0 (127)	≤ 0.49	≥ 0.81	≥ 0.81	217	TBD



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after metalizing and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

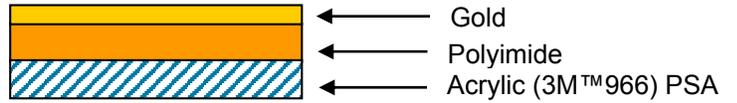
SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G407760	146493	0.5 mil	G407761	TBD
G407710	146490	1.0 mil	G407711	146491
G407720	146492	2.0 mil	G407721	TBD
G407730	TBD	3.0 mil	G407731	TBD
G407750	161598	5.0 mil	G407751	TBD

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.

PRODUCT BULLETIN



First Surface Gold Coated Polyimide Tape with Acrylic 3M™ 966 Adhesive

Sheldahl® Brand Materials first surface gold coated polyimide tapes with acrylic 3M™966 adhesive are used whenever a very low emittance and moderate solar absorptance surface is needed. The acrylic 3M™966 adhesive is nominally 2.3 mils thick, provides a strong bond with low outgassing, and can be used over a moderate temperature range. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, or 2 mil thick polyimide that conforms to the requirements of ASTM D-5213. The gold coating is nominally 900 Å thick. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in any width needed. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Absorptance (α)	≤ 0.30
Hemispherical emittance (ϵ_H)	≤ 0.03
Normal emittance (ϵ_N)	≤ 0.03
Typical α/ϵ	15
Adhesion to stainless steel	≥ 20 oz./inch of width
Intermittent temperature range	-185° C to 230° C (-300° F to 450° F) ^A
Continuous temperature range	-60° C to 120° C (-75° F to 250° F) ^A

^A Zero peel strength of acrylic pressure sensitive adhesive is at about -45°C (-50°F).

Standard Item Number	Thickness mil (μm)	Typical Weight (g/m^2)	Perforation Item Number
146487	0.5 (12.5)	81	TBD
146482	1.0 (25)	98	146483
146486	2.0 (51)	133	TBD



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after metalizing and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

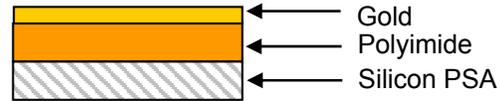
SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G406400	146482	1.0 mil	G406401	146483
G406420	146486	2.0 mil	G406421	TBD
G406460	146487	0.5 mil	G406461	TBD

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.

PRODUCT BULLETIN



First Surface Gold Coated Polyimide Tape with Silicon Adhesive

Sheldahl® Brand Materials first surface gold coated polyimide tapes with Silicon adhesive are used whenever a very low emittance and moderate solar absorptance surface is needed. The Silicon adhesive is nominally 1 mil thick, provides a strong bond with moderate outgassing, and can be used over a wide temperature range. These tapes may be bonded to structures to reduce radiative heat transfer. They can also be used on multilayer insulation blankets to close the edges or repair rips in the outer layers.

This product may be ordered with 0.5, 1, or 2 mil thick polyimide that conforms to the requirements of ASTM D-5213. The gold coating is nominally 900 Å thick. Although the standard widths for this tape are 1, 2, 3, 4, and 6 inches, it may be ordered in widths up to 26 inches. Rolls no more than 4 inches wide are 108 feet (33 m) long; the 6 inch wide rolls are 54 feet (16.5 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Absorptance (α)	≤ 0.30
Hemispherical emittance (ϵ_H)	≤ 0.03
Normal emittance (ϵ_N)	≤ 0.03
Typical α/ϵ	15
Adhesion to stainless steel	≥ 10 oz./inch of width
Intermittent temperature range	-185° C to 260° C (-300° F to 500° F)
Continuous temperature range	-185° C to 150° C (-300° F to 300° F)

Standard Item Number	Thickness mil (μm)	Typical Weight (g/m^2)	Perforation Item Number
TBD	0.5 (12.5)	54	TBD
146498	1.0 (25)	71	TBD
146500	2.0 (51)	107	TBD



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after gold coating and combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

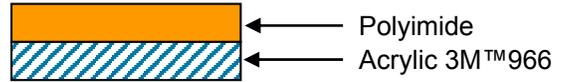
SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G407960	TBD	0.5 mil	G407961	TBD
G407910	146498	1.0 mil	G407911	TBD
G407920	146500	2.0 mil	G407921	TBD

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.

PRODUCT BULLETIN



Polyimide Tape with Acrylic 3M™ 966 Adhesive

Sheldahl® Brand Materials polyimide tapes with 3M™966 adhesive have a variety of uses in satellite applications. The acrylic 3M™966 adhesive is nominally 2.3 mils thick, provides a strong bond with low outgassing, and can be used over a moderate temperature range.

This product may be ordered with 0.5, 1, 2, or 5 mil thick polyimide that conforms to the requirements of ASTM D-5213. Although the standard widths for this tape are 1, 2, 3, and 4 inches, it may be ordered in any width needed. Each roll is 108 feet (33 m) long.

PRODUCT CHARACTERISTICS

Parameter (independent of film thickness)	Specified Value
Adhesion to stainless steel	≥ 20 oz./inch of width
Intermittent temperature range	-185° C to 230° C (-300° F to 450° F) ^A
Continuous temperature range	-60° C to 120° C (-75° F to 250° F) ^A

^A Zero peel strength of acrylic pressure sensitive adhesive is at about -45°C (-50°F).

Standard Item Number	Thickness mil (µm)	Typical Weight (g/m ²)	Perforation Item Number
146397	0.5 (12.5)	81	TBD
146391	1.0 (25)	98	146392
146394	2.0 (51)	133	162496
146396	5.0 (127.5)	238	—



A Multek Brand

POST PROCESSING – PERFORATION & COVERLAY

This product may be processed after combining the adhesive to the film to enhance its functionality. We offer a standard perforation pattern with 0.76 mm (0.03 in.) diameter holes on 6.35 mm (0.25 in.) centers, with a nominal 1.1% open area. We can also place a coverlay on the tape to protect it from accidental damage during handling and application.

WARRANTY INFORMATION

Multek warrants that our thermal control materials will meet all acceptance testing criteria for one year from the date of shipment (except Germanium, see product bulletin) if the materials have been stored indoors at standard conditions in their original packaging.

SHELF LIFE

This product shall meet specified values for a minimum of 12 months after the date of shipment provided that the material is stored in its original unopened container at normal interior temperatures (10° C to 27° C/50° F to 80° F).

The shelf life of the material should be much longer than the warranty period. We recommend retesting any material that is more than one year old (or more than one year since most recent testing) prior to use. This will verify that the material has not been accidentally damaged. Multek offers retest services for a nominal fee.

SPECIFICATION AND ITEM NUMBERS

STANDARD NUMBERS		Thickness	PERFORATION NUMBERS	
Multek Specification	Item Number		Multek Specification	Item Number
G401160	146397	0.5 mil	G401161	TBD
G401100	146391	1.0 mil	G401101	146392
G401120	146394	2.0 mil	G401121	162496
G401150	146396	5.0 mil	—	—

Multek manufactures a broad range of vacuum deposited films, laminates and tapes. Ask for additional product bulletins describing other Sheldahl® Brand Materials.

The information on this product bulletin is based on data obtained by our research and is considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data and the results obtained from the use thereof. This information is furnished upon the condition that the recipient shall conduct tests to determine the suitability of the product for his or her particular application.