

Information About *Resin Designs*® Brand Connector Seal Grommets and Sealing Strips

Connector Seal Grommets and Sealing Strips

Resin Designs® connector seal grommets and sealing strips provide sealing and corrosion protection for indoor and outdoor equipment, including connectors and electrical components. The material is cold-applied like conventional tapes and grommets or gaskets, yet it has sealing capabilities similar to high-performance potting compounds and is superior in conformability to traditional elastomeric gaskets. This material is unique among high-performance sealing materials because of its ease of use and its ability to conform, coat and self-heal, yet still be easily re-entered.

Extensive testing has shown that *Resin Designs* brand gel materials provide an effective barrier against corrosion. Even in damp environments, the gel coats surfaces as it is applied to form a tight environmental seal.

Connector Seal Grommets for Electrical Contact and Wire Seals

Resin Designs connector seal grommets provide sealing and corrosion protection for miniaturized multiway connectors and cable entries. They are used in connectors for grommet, perimeter and face seal applications, replacing the need for individual wire seals, multiwire block seals (and related cost for sealing plugs) or mold-in-place sealants.

Resin Designs connector seal grommets' self-healing characteristics allow for multiple insertions and extractions of the connector contact while maintaining a seal with the contact removed or reinserted. Mechanical, electrical, chemical and thermal testing, as well as use on production connectors, has shown that connector seal grommets form a re-enterable, tight environmental seal. They are ideal for automotive underhood electronics, commercial connectors and electrical interface applications. The grommet consists of a three-layer laminate: the middle layer is a thick, soft silicone gel with excellent sealing capabilities under compression; the thin top and bottom layers allow easier handling of the grommet as a whole, while reducing insertion force.

Connector Seal Grommets

Type

Cold-applied, pre-cured silicone gel; laminated with a top and bottom layer; supplied in rolls or in custom precut shapes

Physical Form

Three-layer laminate; middle layer is a thick, soft silicone gel; the top and bottom layers allow easier handling

Special Properties

Forms tight environmental seal; conformable; re-enterable; available in soft form for minimum insertion or firmer form for better overall handling

Potential Uses

Provides sealing and corrosion protection for miniaturized multiway connectors and cable entries

Sealing Strips

Type

Cold-applied, pre-cured silicone gel; backed or unbacked; supplied in rolls or in custom precut gasket shapes

Physical Form

Soft tacky precured gel available unbacked, *Teflon*®-backed, rubber-backed, or open-cell-foam-backed; flame-retardant versions also available

Special Properties

Forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair

Potential Uses

Sealing and corrosion protection for indoor or outdoor equipment, including connectors and electrical components

PRODUCT INFORMATION

<i>Resin Designs</i> ® Brand Product	Description	Features
Connector Seal Grommets		
GT-4201 Connector Seal Grommet	Connector sealing; standard soft gel	Tight environmental seal; conformable; re-enterable, soft form for minimum insertion force
GT-6201 Connector Seal Grommet	Connector sealing; firmer gel	Tight environmental seal; conformable; re-enterable; firmer form for better overall handling
Sealing Strips		
GT-1000 Sealing Strip	Sealing strips; unbacked; both sides tacky	Both sides tacky; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1010 Sealing Strip	Sealing strips; <i>Teflon</i> ®-backed; one side tacky	<i>Teflon</i> -backed; one side tacky; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1020 Sealing Strip	Sealing strips; rubber-backed; one side tacky	Rubber-backed; one side tacky; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1030 Sealing Strip	Sealing strips; foam-backed; one side tacky	Foam-backed; one side tacky; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1600 Sealing Strip	Sealing strips; flame-resistant; unbacked; both sides tacky	Both sides tacky; flame resistant; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1610 Sealing Strip	Sealant strips; flame-resistant; <i>Teflon</i> -backed; one side tacky	<i>Teflon</i> -backed; one side tacky; flame resistant; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1620 Sealing Strip	Sealing strips; flame-resistant; rubber-backed; one side tacky	Rubber-backed; one side tacky; flame resistant; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair
GT-1630 Sealing Strip	Sealing strips; flame-resistant; foam-backed; one side tacky	Foam-backed; one side tacky; flame resistant; forms tight environmental seal; prevents corrosion; requires no heat or special tools to apply; allows easy inspection or repair

Resin Designs® Brand Product	Potential Uses	Application Methods
Connector Seal Grommets		
GT-4201 Connector Seal Grommet	Sealing and corrosion protection for miniaturized multiway connectors and cable entries requiring low insertion force	Cold-applied, either automatically or manually, requiring no heating or curing. The grommet forms an instant environmental barrier in both hot and cold temperatures. A rapid seal is created without the delay of lengthy cure cycles.
GT-6201 Connector Seal Grommet	Sealing and corrosion protection for miniaturized multiway connectors and cable entries requiring better overall handling characteristics or automated assembly	
Sealing Strips		
GT-1000 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment, including connectors and electrical components; unbacked versions are typically used for wraparound protection and are not offered in stamped shapes	Cold-applied, it is easily installed, forming an instant environmental barrier in both hot and cold temperatures. No heating or other tools are required; a rapid seal is created without the delay of lengthy cure cycles. Should inspection or repair be necessary, the strip can be peeled away cleanly from the substrate.
GT-1010 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment, including connectors and electrical components; <i>Teflon</i> -backed versions are typically used as stamped pads where additional abrasion resistance to the non-sealing surface is required	
GT-1020 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment, including connectors and electrical components; rubber-backed versions are typically used as stamped pads or gaskets to offer sealing between two surfaces; can also be used for wraparound protection	
GT-1030 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment, including connectors and electrical components; foam-backed versions are typically used as stamped pads for interfacial seals between two mating surfaces to isolate electrical contacts from moisture; can also be used for wraparound protection	
GT-1600 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment that requires a flame-resistant sealing material, including connectors and electrical components; unbacked versions are typically used for wraparound protection and are not offered in stamped shapes	
GT-1610 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment that requires a flame-resistant sealing material, including connectors and electrical components; <i>Teflon</i> -backed versions are typically used as stamped pads where additional abrasion resistance to the non-sealing surface is required	
GT-1620 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment that requires a flame resistant sealing material, including connectors and electrical components; rubber-backed versions are typically used as stamped pads or gaskets to offer sealing between two surfaces; can also be used for wraparound protection	
GT-1630 Sealing Strip	Sealing and corrosion protection for indoor or outdoor equipment that requires a flame-resistant sealing material, including connectors and electrical components; foam-backed versions are typically used as stamped pads for interfacial seals between two mating surfaces to isolate electrical contacts from moisture; can also be used for wraparound protection	

PRODUCT INFORMATION

<i>Resin Designs</i> [®] Brand Product	Description	Features
Sealing Strips		
GT-1700 Sealing Strip	A soft pre-cured silicone gel stabilized by mesh in the center. Both sides are tacky.	Makes an excellent weather seal material as a compression gasket.
GT-1720 Sealing Strip	A soft pre-cured silicone gel stabilized by mesh in the center. One side is tacky and one side is not.	

<i>Resin Designs</i>[®] Brand Product	Potential Uses	Application Methods
Sealing Strips		
GT-1700 Sealing Strip	Sealing and corrosion protection in indoor and outdoor locations. Sealing of aircraft cabins and auto interiors.	Cold applied, pre-cured silicone gel impregnated in woven fiberglass, supplied in rolls or custom cut gasket shapes.
GT-1720 Sealing Strip	Sealing and corrosion protection in indoor and outdoor locations. Sealing of aircraft cabins and auto interiors.	

TYPICAL PROPERTIES

Specification Writers: Please contact your Resin Designs sales office before writing specifications on this product.

Connector Seal Grommets

<i>Resin Designs®</i> Brand Product	Hardness, g	Tack, g	Stress Relaxation, %	Specific Gravity	Volume Resistivity, ohm-cm	Dielectric Strength, volts/mil	Useful Temperature Range, °C	Hardness, Shore 00	Thermal Conductivity, W/m·K	Linear Coefficient of Thermal Expansion, 0 to 150°C, µm/(m·°C)	Weight Loss, after 336 hr at 150°C, %
GT-4201 Connector Seal Grommet	190 ± 35	30 ± 20	50 ± 10	0.97 ± 0.01	>1 x 10 ¹¹	225	-40 to 125	40	0.2	865	3
GT-6201 Connector Seal Grommet	250 ± 50	30 ± 20	50 ± 20	0.97 ± 0.01	>1 x 10 ¹¹	225	-40 to 125	50	0.2	865	3

Sealing Strips

<i>Resin Designs®</i> Brand Product	Elongation, % minimum	Useful Temperature Range, °C	Volume Resistivity, ohm-cm	Dielectric Strength, volts/mil	Specific Gravity, without backing	Weight Loss, after 336 hr at 150°C, %	Flammability, internal testing, UL 94 equivalent
GT-1000 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	0.97	3.5	HB
GT-1010 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	0.97	3	HB
GT-1020 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	0.97	3	HB
GT-1030 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	0.97	3	HB
GT-1600 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	1.1	2	HB
GT-1610 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	1.1	2	HB
GT-1620 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	1.1	2	HB
GT-1630 Sealing Strip	150	-40 to 125	>1 x 10 ¹¹	225	1.1	2	HB

Sealing Strips

<i>Resin Designs®</i> Brand Product	Temperature Range, °C	Adhesive Tack of Tacky Side(s), g	Adhesive Tack of No Tack Side(s), g	Tear Strength ppi minimum	Weight Loss, after 336 hr at 150°C, %
GT-1700 Sealing Strip	-40 to 150	20 min	n/a	10	3.0 max
GT-1720 Sealing Strip	-40 to 150	20 min	30 max	10	3.0 max

Two product families are available, each with its own balance of properties, to meet the requirements of the most demanding applications:

- GT-4201 is a soft, silicone-gel laminate, best for applications requiring minimum contact insertion forces
- GT-6201 is a harder, silicone-gel laminate with better overall handling characteristics suitable for automated assembly

Resin Designs connector seal grommets are supplied on rolls in standard thicknesses ranging from 1.5- to 4.8-mm. Custom precut stamped shapes are also available.

Installation

Applying *Resin Designs* connector seal grommets – either automatically or manually – is fast, easy, and cost-effective. Grommets form instant environmental barriers in both hot and cold temperatures; a rapid seal is created without the delay of lengthy cure cycles.

Sealing Strips for Sealing and Corrosion Prevention

Resin Designs sealing strips provide sealing and corrosion protection for indoor and outdoor equipment, including connectors and electrical components. Extensive testing has shown that *Resin Designs* gel materials provide an effective barrier against corrosion. Even in damp environments, the gel coats surfaces as it is applied to form a tight, environmental seal.

Resin Designs sealing strips are highly conformable. Applied as recommended in wraparound applications, *Resin Designs* strips will accommodate the tight bends and transitions of even complex electrical connectors. In gasketing applications, *Resin Designs* strips can be easily compressed to flow and fill rough gasket surfaces, even when the application force is low and unevenly distributed.

Resin Designs strips are supplied on rolls in widths up to 20 inches and thicknesses from 0.03- to 0.17-inch. Custom precut gasket shapes are available with *Resin Designs* sealing strips backed with *Teflon*, rubber or foam. *Teflon*-backed versions are typically used as stamped pads where additional abrasion resistance to the non-sealing surface is required. Rubber-backed versions are typically used as stamped pads or gaskets to offer sealing between two surfaces. They can also be used for wraparound protection. Unbacked versions are typically used for wraparound protection and are not offered in stamped shapes.

Installation

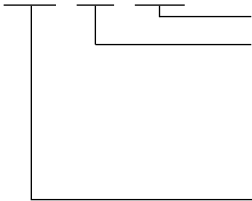
Application of *Resin Designs* sealing strips is fast and cost-effective. The product is installed easily and forms an instant environmental barrier in both hot and cold temperatures – no heating or other tools are required – and a rapid seal is created without the delay of lengthy cure cycles. Should inspection or repair be necessary, *Resin Designs* strips can be peeled away cleanly from the substrate.

Product Nomenclature and Packaging – *Resin Designs* Connector Seal Grommets

Part Numbering System

Stamped Products

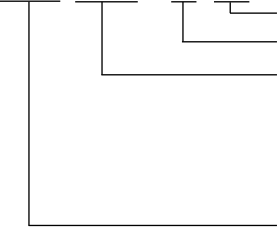
GT-XXXX-TXX-XXXX



- Drawing Number**
- Thickness**
- 1.5 mm (0.06 inch)
 - 2.3 mm (0.09 inch)
 - 3.0 mm (0.12 inch)
 - 4.0 mm (0.16 inch)
 - 4.6 mm (0.18 inch)
- Material Type**
- 4201
 - 6201

Roll Products

GT-XXXX-TX.XX-S-XX-RXX



- Roll Length (m)**
- Width (mm)**
- Thickness**
- 1.5 mm (0.06 inch)
 - 2.3 mm (0.09 inch)
 - 3.0 mm (0.12 inch)
 - 4.0 mm (0.16 inch)
 - 4.6 mm (0.18 inch)
- Material Type**
- 4201
 - 6201

Roll length depends on the product thickness.

STORAGE AND SHELF LIFE

Because these are precured materials, there is no special storage condition required. Product should be stored in the original packaging under normal warehouse conditions to maintain the integrity of the packaging materials. Product shelf life and usage date is 48 months from the manufacturing date as the surface tack on some of the products can change after this time

LIMITATIONS

These products are neither tested nor represented as suitable for medical or pharmaceutical uses.

SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE RESIN DESIGNS WEBSITE AT WWW.RESINDESIGNS.COM, OR FROM YOUR RESIN DESIGNS REPRESENTATIVE

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Resin Designs' products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Resin Designs' sole warranty is that the product will meet the Resin Designs sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

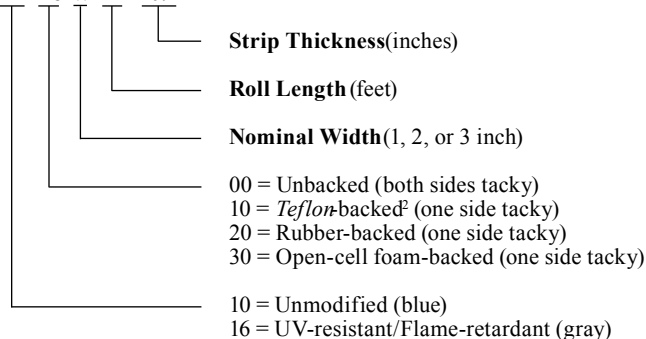
RESIN DESIGNS SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

RESIN DESIGNS DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Product Nomenclature and Packaging – *Resin Designs* Sealing Strips

Part Numbering System

GT-Mm Bb-W-RL-T0.Y¹



Example:

GT-1020-1-R25 = Unmodified (blue) rubber-backed *Resin Designs* strip supplied 1 inch wide and 0.03 inch thick¹ on 25-foot rolls.

Example:

GT-1630-1-R25 = UV Stab/Flame-retardant (gray), open-cell foam-backed *Resin Designs* strip supplied, 1 inch wide, 0.03 inch thick¹ on 25-foot rolls.

¹For 0.03-inch-thick *Resin Designs* strip the T0.Y portion of the part number is omitted.

²*Teflon*-backed strip is not recommended for spiral-wrapped applications where there are rapid and substantial dimensional changes in the substrate.

Standard Packaging

25 feet per roll for 0.03-inch-thick *Resin Designs* strip
20 feet per roll for 0.06-inch-thick *Resin Designs* strip
12 feet per roll for 0.12-inch-thick *Resin Designs* strip
10 feet per roll for 0.15-inch-thick *Resin Designs* strip
8 feet per roll for 0.17-inch-thick *Resin Designs* strip

Special widths available for each thickness.