

Information About *Dow Corning*[®] Brand Connector Seal Grommets and Sealing Strips

Connector Seal Grommets and Sealing Strips

Dow Corning[®] 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 *Dow Corning* 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

Dow Corning 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.

Dow Corning 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

Dow Corning® 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

Dow Corning® 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	

TYPICAL PROPERTIES

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Connector Seal Grommets

<i>Dow Corning®</i> Brand Product	Voland 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>Dow Corning®</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

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

Dow Corning connector seal grommets are supplied on rolls in standard thicknesses ranging from 1.5- to 7.1-mm. Custom precut stamped shapes are also available.

Installation

Applying *Dow Corning* 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

Dow Corning sealing strips provide sealing and corrosion protection for indoor and outdoor equipment, including connectors and electrical components. Extensive testing has shown that *Dow Corning* 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.

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

Dow Corning 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 *Dow Corning* 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

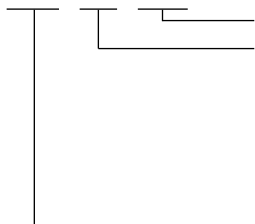
Application of *Dow Corning* sealing strips is fast and cost-effective. The product is installed easily and forms an instant environmental barrier in both hot and cold temperatures – no heating or other tools are required – and a rapid seal is created without the delay of lengthy cure cycles. Should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

Product Nomenclature and Packaging – *Dow Corning* Connector Seal Grommets

Part Numbering System

Stamped Products

GT-XXXX-TXX-XXXX



Drawing Number

Thickness

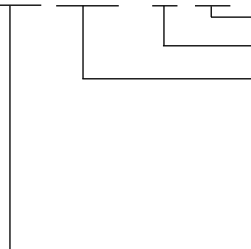
- 1.5 mm (0.06 inch)
- 2.3 mm (0.09 inch)
- 3.0 mm (0.12 inch)
- 4.0 mm (0.16 inch)
- 4.6 mm (0.18 inch)
- 7.1 mm (0.28 inch)

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)
- 7.1 mm (0.28 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 or usage date required. The product should be stored in the original packaging under normal warehouse conditions to maintain the integrity of the packaging materials.

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 DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com, or consult your local Dow Corning 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 Dow Corning's 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.

Dow Corning's sole warranty is that the product will meet the Dow Corning 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.

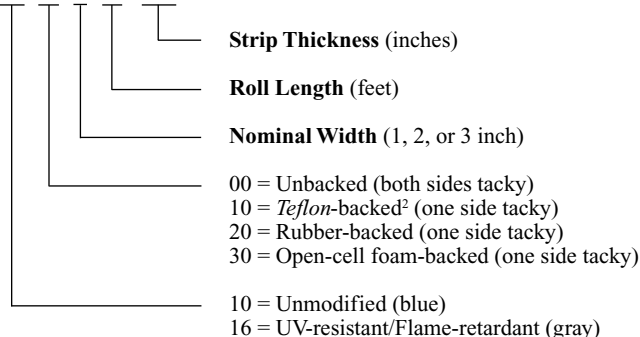
DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Product Nomenclature and Packaging – *Dow Corning* Sealing Strips

Part Numbering System

GT-Mm Bb-W-RL-T0.Y¹



Example:

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

Standard Packaging

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

Special widths available for each thickness.

¹For 0.03-inch-thick *Dow Corning* 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.



Electronics
Solutions

Dow Corning is a registered trademark of Dow Corning Corporation.

All other trademarks are the property of their respective owners.

©2003, 2004, 2005 Dow Corning Corporation. All rights reserved.

Printed in USA

AGP7297

Form No. 11-1073D-01