CPI

Products & Solutions

global company

SPIRAL WOUND GASKETS

The **SWG TR/TAC/TAI/TACI** are composed of a sealing element which combines a metal strip and a strip of soft material (FM, PTFE, Graphite, Mica, etc.), wrapping both strips in concentric spirals with a DC voltage.

The main property of the **spiral wound gaskets**, due to the elastic action of the compound by the metal strip profile, is that it offers a perfect seal under fluctuating pressure and temperature conditions, responding in turn to significant temperature values maintain perfectly its position due to its elastic recovery.

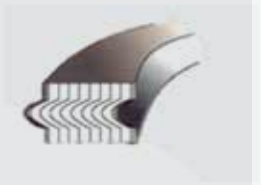
LIMITS OF TEMPERATURES OF THE MOST COMMON MATERIALS

Material	Minimum (C°)	Maximum (C°)	Denomination
304 SS	-195	760	304
316L SS	-100	760	316L
317L SS	-100	760	317L
321 SS	-195	760	321
347 SS	-195	925	347
Carbon Steel	-40	540	CRS
Alloy 20	-185	760	A-20
HASTELLOY B 2	-185	1090	HAST B
HASTELLOY C 276	-185	1090	HAST C
INCOLOY 800	-100	870	IN 800
INCOLOY 825	-100	870	IN 825
INCONEL 600	-100	1090	IN 600
INCONEL 625	-100	1090	IN 625
INCONEL X750	-100	1090	INX
MONEL 400	-130	820	MON
Nickel 200	-195	760	NI
Titanium	-195	1090	TI
Ceramic	-212	1090	CER
Flexible graphite	-212	510	F.G
PTFE	-240	260	PTFE
Mica	-212	590	MICA

COMMON PROFILES

TR – Without rings

Suitable for valves, pumps, caps, male-female or flat face flanges. The inner and outer ring is reinforced with several soft materials without filler metal layers to provide optimum stability and better compression and sealing. Spiral wound suitable for male-female flanges, annular or flat lace.

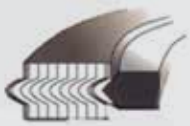


TAC – Outer ring

Standard flanges RF suitables for high pressure. It is equipped with an outer ring of a solid metal that keeps the joint perfectly centered on the face of the flange. It provides additional radial strength to prevent gasket to deform and also acts as a compression limiter. Above the 600 class is recommended to add an inner ring in the spiral wound gasket.

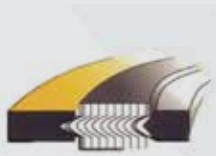
TAI – Inner Ring

Suitable for high pressure flanges male-female with larg size. A solid inner ring acts as a compression limiter and fills the annular space between the edge of the flange and the inside of the joint. This meeting is designed to prevent accumulation of solids, reduce turbulence typical of fluids and minimize erosion of the flanges.

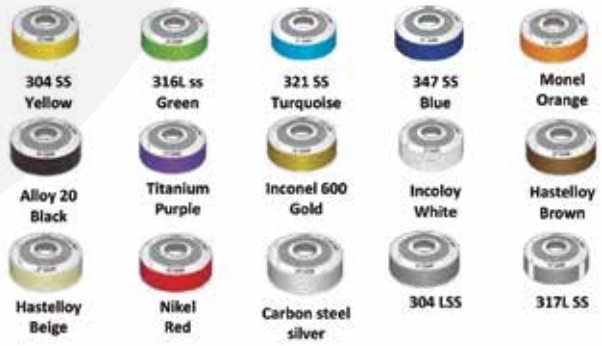


TACI – Outer and inner ring

Flanges for high temperatures and high pressure, corrosive and toxic media . It is a gasket having an inner ring to provide additional compression limit and also performs the barrier function of heat and corrosion. Prevents erosion of the flanges.



IDENTIFYING COLOURS



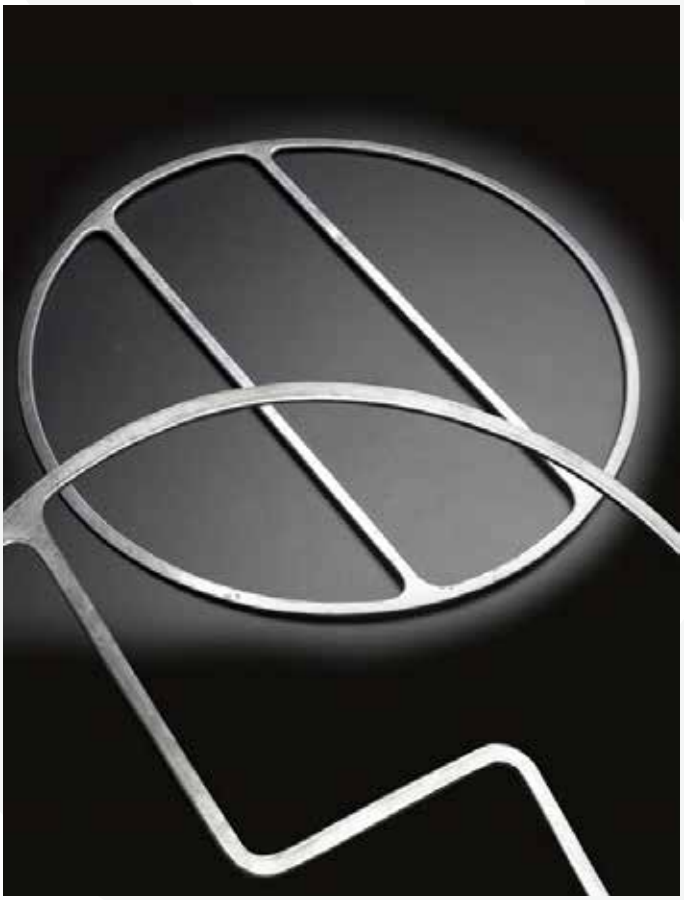
DOUBLE METAL JACKETED GASKETS

Metal jacketed gaskets are formed by a soft material soul (**FM, PTFE, graphite**, etc.) coated partially or totally by a ductile metal foil. The quality of materials for the **metal jacketed gaskets** must be chosen according to the working pressure and the fluid with which it is in contact. Thanks to their understandable structure and light are more fully shown that the metal in pressures and high temperatures.

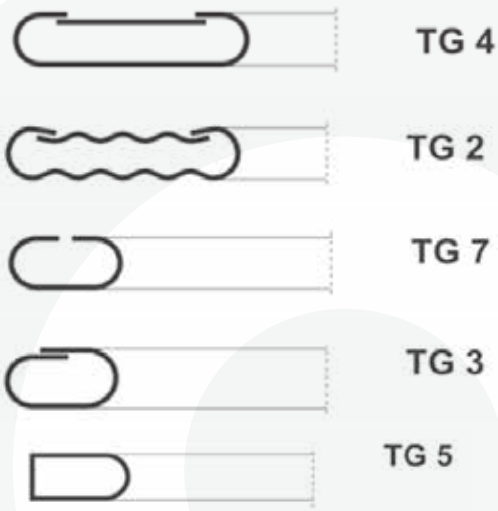
The **metal jacketed gaskets** can be manufactured with one or more ribs arranged in different configurations. The metal jacketed gaskets are based on standards such as **ASME 16.20** or according to specific customer specifications. The most commonly used for manufacturing metal-plastic joints are materials as metal material: **copper, aluminium, AISI 304, 316L, 321**, **soft iron** and as filler material: **mineral fiber or graphite.**

DIMENSIONS AND FORMS

The metal jacketed gaskets are manufactured in the most diverse circular, oval, rectangular, square, rhomboid forms, etc. These boards have no size limit however depending on the width limitation of commercial materials, sometimes requiring the use of welding which is performed following welding procedures. The standard thickness is 3.2 mm. although depending on the use, this may be higher or lower.



COMMON PROFILES



MATERIALS

Metallic material	Filler material
Carbon Steel	Ceramic fiber
AISI 502 (4-6% CR.Mo)	Graphite
AISI 304 - 304L – 304H	PTFE
AISI 316 - 316L	Compressed asbestos fiber
AISI 316 Ti	Mineral fiber
AISI 317L	
AISI 321	
AISI 409 – 409L	
AISI 410	
AISI 430	
Copper	
Brass	
Aluminum	
ALLOY 400 - MONEL	
ALLOY 600 – INCONEL	
Titanium	
ALLOY 200 - NIKEL	

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RTJ GASKETS

RTJ joints are indicated in applications high pressures and temperatures. They are designed to be accommodated in specific slots. Flanges contact surfaces of the gasket and the flange must be carefully machined and finished. They are particularly suitable for very high pressures, up to 1000 psi. The **RTJ gasket** material should be softer than the flange itself to avoid damage to their faces.

This product can be in 4 different profiles, but the most common are Octagonal and Oval.

RTJ SEALS PROFILES

TG 30

RTJ oval for standard flanges. As with all solid metal Ring Type Joints, It is recommended to replace the ring when flanged connection is broken. Surface finish of the TG 30 sealing faces shall not be greater than 1,6 um Ra / 63 in RMS. CPI-PROYSOL TG30 joints can be manufactured in accordance with relevant standards to suit the following flange designations:

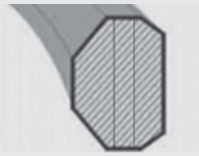
· API 6ª
· ASME B16.5
· ASME B16.47 SERIES A
· BS1560

TG 31

RTJ oval for standard flanges. As with all solid metal Ring Type Joints, It is recommended to replace the ring when flanged connection is broken. Surface finish of the TG 31 sealing faces shall not be greater than 1,6 um Ra / 63 in RMS. CPI-PROYSOL TG31 joints can be manufactured in accordance with relevant standards to suit the following flange :

· API 6ª
· ASME B16.5
· ASME B16.47 SERIES A
· BS1560

TG 33

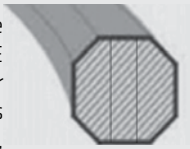


The style RX is an adaptation of the RTJ TG30. It is designed to fit the same groove design as a TG30 joint. The geometry of this modified design induces a pressure energising effect when the assembly is pressurised improving the efficiency of the seal. Surface finish of the TG33 sealing faces shall not be greater than 1,6 um Ra / 63 in RMS.

INDUSTRIAL APPLICATION

They are used mainly in oil installations in drilling equipment and assemblies of valves and pipes and pressure vessels in some high performance.

TG 32



The style BX TG 32 ring type joints, are manufactured in accordance with ASME B16.20, API 6A and API 17D, are designed for use on API 6BX flanges on pressure systems rated up to 20000 psi. When correctly fitted, the style BX TG32 gasket allows face to face contact of the flange faces which means that the gasket is fully confined on both diameters. The maximum surfaces finish of the TG32 sealing faces shall not be greater than 0.8 um Ra / 32 in RMS.

MATERIAL	UNS NUMBER	MAXIMUM HARDNESS BRINELL (BHN)	MAXIMUM HARDNESS ROCKWELL (RB)	IDENTIFICATION
Soft Iron	-	90	56	D
Low Carbon Steel	-	120	68	S
F5(4-6 % Chrome 1/2% Moly)	K42544	130	75	F5
St. St. AISI 304	S30400	160	83	S304
St. St. AISI 316	S31600	160	83	S316
St. St. AISI 347	S34700	160	83	S347
St. St. AISI 410	S41000	170	86	S410
Alloy 600	N06600	200	92	N06600
Alloy 625	N06625	200	92	N06625
Alloy 800	N08800	200	92	N08800
Alloy 825	N08825	200	92	N08825
Alloy C276	N10276	200	92	N10276
SMO 254	S31254	180	89	S31254
Duplex	S31803	250	-	S31803
Super Duplex	S32760	200	92	S32760
Monel ® 400 (M400)	N04400	200	92	N04400
Titanium Gr.2				

Other hardnesses available on request

KAMMPROFILE GASKETS

The **kammprofile gaskets** It consists of a metal core with concentric grooves (sawtooth) covered by a layer of soft material depending on the application may be **PTFE or graphite**.

The toothed metal profile of the kammprofile gaskets allows you to use the board under high pressure crushing low torque.

This type of gaskets are the ideal solution for standard applications for pipes and heat exchanger option; provide the highest levels of integrity sealing.

PROFILES:

TGCPA
Corrugated metal core flat surface without cantering ring (for male / female flange).

TGCPB
Corrugated metal core flat surface and integrated cantering ring.

TGCPC
Corrugated metal core flat surface and integrated cantering ring.

TGCPE
Corrugated metal core with convex surface without cantering ring.

TGCPF
Corrugated metal core with convex surface and integrated cantering ring.

TGCPG
Corrugated metal core with convex surface and mobile cantering ring.

TGCPH
Alma flat metal surface coating material (PTFE or Graphite).

ADVANTAGES

- It can seal pressure up to 400 bar.
- It can withstand temperatures up to 1000°C - depending on the used materials of the core and layers.
- It can be used in all media (pH 0-14), will depend on the core materials and coating used.
- It can maintain effective sealing performance in temperature and variable pressure.
- Does not damage the flange surfaces and can be easily removed.
- The toothed metal core can be reused, subject to inspection posterior cleaning and replacement of the layers.

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DIELECTRIC KITS

DIELECTRIC KITS

Dielectric kits or sets are a set of pieces of different types, designed to electrically isolate the current flows in pipes, flanges and metal equipment.
Avoid metal to metal contact, stopping the static current. Kits or sets dielectrics provide an effective seal and are designed to maintain the integrity and reliability of the system.
The kits are made of dielectric materials and low water absorption high find, are formed by a central board, caps to protect the bolts, washers and grommets iron manufactured according to the measures of the flange.
Thus, they manage to prevent corrosion and prolong its life.
CPI-PRODYSOL produces dielectrics kits according to DIN or ASA standards.

CHARACTERISTICS

- They can be used with misaligned flanges
- It can be used in RTJ or BX flanges
- Low initial torque
- Do not retighten required
- Suitable for high pressures
- Reusable
- Limited exhibition area (Long fire life)
- Compensates pressure variations, changes compression, vibration, temperature variations, etc.
- It greatly reduces error during installation
- Wide selection of materials available
- Low installation costs and maintenance

DIELECTRIC KITS CPI-TGCD

Type E

It is a FF gasket meets the same outside diameter as the screw holes of the flange and bolt holes precision cutting. This design facilitates the correct alignment of the seal during installation. E type boards are available in a variety of high temperature materials.

Type F

They are made to fit the part of the raised face of the flange. As there are no holes for the screws on the board F, the outer diameter of the seal is in the inner circle diameter holes. The same materials as type E gasket are available.

Type D

D-type seals are specifically designed to fit into the slots of the flanges.

They are made of a fabric reinforced phenolic material in the middle and are dimensioned to ANSI and API specifications. Type D boards are available in oval and octagonal in shape. BX gaskets are also available with pressure to 15,000.

AVAILABLE MATERIALS

Gasket

Material	Dielectric Strength	Water Absorption	Compressive Strength	Maximum Temperature
Phenolic	500 vpm	1.5%	25000 psi	107°C
Neoprene Phenolic	500 vpm	1.5%	25000 psi	79°C
G-10	550 vpm	0.10%	50000 psi	141°C

Special materials for high temperatures under request

Washers

Material	Dielectric Strength	Water Absorption	Compressive Strength	Maximum Temperature
Phenolic	400 vpm	1.1%	25000 psi	107°C
G-10	550 vpm	0.10%	50000 psi	141°C

Special materials for high temperatures under request

Sleeves

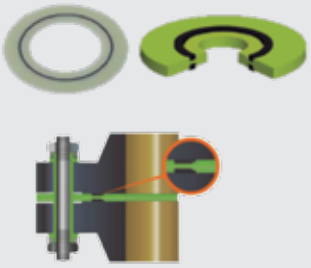
Material	Dielectric Strength	Water Absorption	Maximum Temperature
Mylar	4000 vpm	0.8%	149°C
Integral Minlon	1200 vpm	0.22%	93°C
Polyethylene	400 vpm	0.01%	41°C
Phenolic	400 vpm	2%	107°C
G-10	550 vpm	0.10%	141°C
Nomex	400 vpm	n/a	232°C

SEALING SYSTEMS

SYSTEM TGCDLB

The TGCDLB system is a low pressure system designed for electrical insulation and flange sealing applications generally.

This gasket is suitable for use in flanges and non-flat flanges in ANSI Class 150/600. In addition to providing electrical insulation, the board is excellent for isolating flanges made of different metals or where prevention of corrosion in the flanges is desired

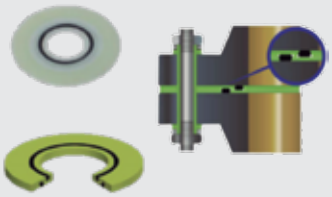


SYSTEM TGCDPGE

The **TGCDPGE system**, It has excellent sealing and insulation design for all types of flanges.

The encapsulated sealing elements located in the slot, prevent the sealing element to break when the bolts and nuts are not equal.

Materials such as Nitrile, EPDM, Viton and PTFE can be used as sealing element; this increases the options for different working conditions. (Consult tables sealing range, temperature and material compatibility in www.cpisefa.com)



SYSTEM TGCDVCS

The seal gasket TGCDVCS type it is a special design for the sealing and insulation in critical services. It is suitable for treated faces, flat faces and RTJ flanges with any pressure even with the API 15,000 psi service. TGCDVCS is a highly reliable system used for sealing and insulation high performance.

METALLIC CORE:

The metal core board is made of stainless steel 316L.

Other metals such as Duplex or Inconel are available upon request.

VENTAJAS

he designs TGCDLB and TGCDPGE It include seals. The purpose of this design is to break each laminated layer within the gasket itself thereby creating a barrier through which fluid and / or gas cannot migrate. The sealing element can be any elastomeric material, as well as more sophisticated Spring Energized-Teflon. As a result of this advanced design, we met maintaining flange, insulation and corrosion of the same, achieving all this economically. TGCDLB is available in types FF (Type E) and RF (Type F). Depending on the selected sealing element, TGCDLB is rated for most applications of hydrocarbons and water service.

MATERIALS

Retention material

G-10 Laminated Glass Reinforced Epoxy (GRE):
Compressive strength: 65.000 PSI
Dielectric strength: 750-800 VPM
Max. Continuous Operating Temperature: 180°C
Water absorption: 0.05%
Flexural strength: 65.000 PSI
Voltage resistance: 50.000 PSI

G-11 Epoxy glass reinforced laminate for high temperatures (GRE):
Compressive strength: 50.000 PSI
Dielectric strength: 500 VPM
Max. Continuous Operating Temperature: 200°C
Water absorption: 0.085%
Flexural strength: 57.700 PSI
Voltage resistance: 41.000 PSI

SYSTEM TGCDVCS – OP

The system TGCDVC – OP is a design of an insulating part, with a sealing surface designed to flow restriction pipe. TGCDVS-OP It incorporates a spring energized PTFE or elastomeric seals that are completely encapsulated in the composite board which makes the hole in the plate is in one piece and easy to install. This eliminates the need for conventional plate's holes, plates and separate supports together. This design of the orifice plate substantially reduces the residual stress and improves overall sealing performance, even under the most extreme conditions in all applications hydrocarbon production and injection.

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NON-ASBESTOS SHEETS

CPI-FM10

CPI-FM10 is manufactured from mixture of organic fibres with NBR binder. All of industries at lower parameters.

Colour	Blue
Maximum temperature	200°C
Maximum pressure	60 bar
Density	1.8 – 2.0g/cm³
Antistick coating	In one side

CPI-FM20

High quality material containing mixture of temperature resisting mineral aramid fibers with special NBR binder. A general material suitable for sealing oils, nonaggressive gases and basic chemicals.

Colour	Green
Maximum temperature	380°C
Maximum pressure	80 bar
Density	1.8 – 2.0g/cm³
Antistick coating	In one side

CPI-FM30

High quality material with wire reinforced. The sheet has excellent mechanical properties. This style is suitable for oils, fuels, lubricants, gases, hydrocarbons, and most dilutes acids and alkalis.

Colour	Green
Maximum temperature	380°C
Maximum pressure	120 bar
Density	1.8 – 1.9g/cm³
Antistick coating	In one side

CPI-FM40

Carbon fiber based on a union of non-asbestos. A universal grade is suitable for all kinds standard industry applications.

Colour	Black
Maximum temperature	400°C
Maximum pressure	100 bar
Density	1.6 – 1.9g/cm³
Antistick coating	On both sides

CPI-FM50

Premium quality manufactured from mixed of graphite based in material CNAF, aramid fibers with high quality NBR binder. Suitable for all kinds standard industry applications. It has low leakage rate in gas application, and easier to cut than CPI-FM40.

Colour	Black
Maximum temperature	450°C
Maximum pressure	100 bar
Density	1.65 – 1.8g/cm³
Antistick coating	On both sides

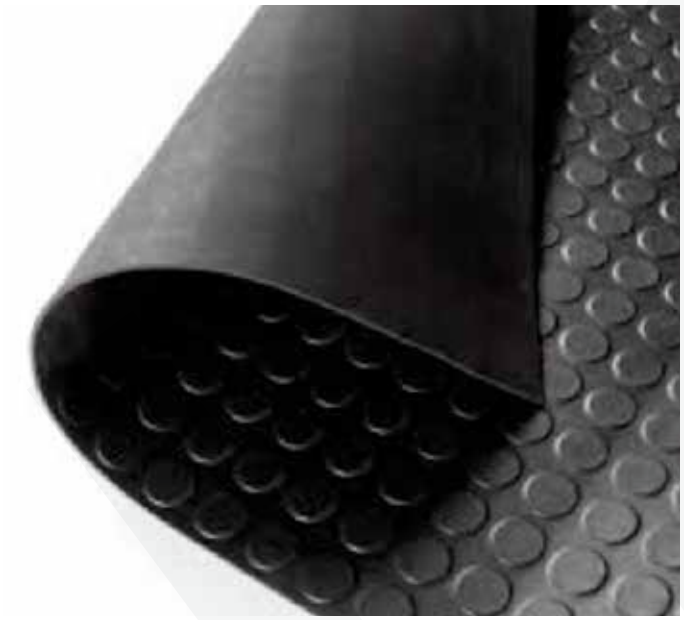
SHEETS AND ROLLS

RUBBER ROLLS

Are mainly used for making pieces intended to:

SHIPBUILDING, AUTOMOTIVE, CHEMICAL INDUSTRY, COATINGS, MINING, and CONSTRUCTION

We are in a position to provide our plates rubber in different qualities in smooth finishes or printing on one or both sides. Also we have qualities with textile and metal insert. we have a highly qualified technical department to solve any problems as soon as possible and at the lowest cost.



These are some of our qualities:
- NBR nitrile
- Ethylene-Porpylene CPI-EL EPDM
- NR Natural Rubber CPI-EL NR
- SBR Butadiene styrene CPI-EL SBR
- CR Neopren CPI-EL CR
- IIR Butyl CPI-EL IIR
- CSM Ethylene chlorosulfonated (Hypalon) CPI-EL HYP
- VMQ Silicone CPI-EL SILICONE
- FKM Fluoroelastomer (Viton) CPI-EL FKM

GRAPHITE SHEETS

Graphite Gasket Sheets combines excellent chemical resistance with an exceptionally wide temperature range to provide outstanding sealing integrity over extended periods. Used in chemical, petrochemical and other industries.

Features
- Temperature resistance at elevated pressure.
- Excellent resistance to thermal spikes.
- Optimal duration
- Self-lubricating and non-stick. Fireproof

Standard technical values_

Specific weight of graphite	1.1 g/cm^3 ± 10%
Maximum temperature	+600 °C
Minimum temperature	-200°C
Maximum pressure	200 atm
Compressibility	From 40% to 50%
Spring back	From 10% to 15%

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O-RINGS

The use of **O-rings** extends at many fields. The main function that characterizes this type of joint is its ability to maintain the seal, preventing the mixture of liquids and gases. They are characterized by their versatility and resistance to high pressures and temperatures. The type of elastomer used in its manufacture can vary. These include:

- **Buna-N / Nitrile (NBR):** The standard material of the O-rings. Mineral oils and greases, animal and vegetable origin, Air facilities, aliphatic hydrocarbons and dilute acids. Working temperature: Between -30 ° C and + 100 ° C. Water resistance up to 80°C
- **Ethylene propylene (EPDM):** Suitable for hot and steam water, hydraulic fluids, brake fluids, alcohols and ketones, coolants, cleaning products and Ozone. Work temperature: Between -50 ° C and + 140 ° C.
- **Fluorocarbon/VITON (FKM):** Very high chemical resistance. Used for oils, gasoline, diesel and oil, concentrated acids, solvents, ozone and oxygen. Work temperature: Between -20 and + 200C.

  The terms FPM, FKM and Viton® very often cause confusion and lead to misinterpretations. All these designations actually stand for a single base material: **flour rubber**.

  FPM is the international abbreviation according to DIN / ISO, whereas FKM is the short form of the fluoroelastomer category according to the American standard ASTM. Viton® is the registered trademark of DuPont Performance Elastomers.
- **Hydrogenated nitrile (HNBR):** Suitable for aliphatic hydrocarbons, coolants and ozone. Work temperature: Between-50 °C and + 150°C.
- **Flurosilicone (FMQ, FVMQ)-SILICONE:** Material apt for fats and oils of animal and vegetable origin, aromatic hydrocarbons, oxygen, ozone, hot air, and water vapor and aging. Work temperature: Between -50 ° C and + 200 ° C.
- **Perfluorinated elastomer / Kalrez (FFKM):** It is the elastomer that offers greater chemical compatibility. It is perfect for aliphatic chlorinated and aromatic hydrocarbons, organic acids, and polar solvents. Work temperature: Between -20°C and + 320 °C.
- **Chloroprene / Neoprene (CR):** The chlorine atom confers increased resistance to oils, approximately Nitrile Natural Rubber and this is often sufficient for many applications. Work temperature: Between -35 and + 100C.
- **Poliuretane (PU):** Polyurethane O-rings are particularly suitable for carrying out those applications where dynamic loads involved. Such applications include, for example, water services, tires and a wide variety of critical applications. In many cases the O-rings are used polyurethane instead of NBR, due to its high mechanical strength. Work temperature: Between -30 ° C and + 100 ° C.

  The range of hardness varies between 40SH and 90SH, and it is possible to manufacture them in colors according **RAL/PANTONE**

  O-rings with certifications: **FDA, WRAS, NSF, KTW, UL, CLP (ACS), W270, DWGW (EN549/EN534/EN681)**, on request.

  The dimensions of the O-rings are determined by the internal diameter and the diameter of its section. We can

O-RINGS

ENCAPSULATED O'RINGS

Encapsulated O-ring seals combine the qualities of PTFE-FEP with silicone elastomers VMQ or Viton-FKM. Consist of a top layer that protects the elastomeric 0.2mm inside chemical aggressive environments.

Different combinations:

- Viton-FKM + FEP
- Viton-FKM + PFA
- Silicone-VMQ + FEP
- Silicone-VMQ + PFA

Encapsulated O-rings are commonly used in the pharmaceutical and food industry as they are manufactured under FDA rules, and in the chemical and petrochemical industries thanks to its ability to work against harsh chemicals.

- **Encapsulated O-ring seals silicone:** normally used as a static gasket, FEP and PFA provide excellent chemical resistance, and body Silicone flexibility that plastic does not have. Usually the soul of silicone (-60 to + 260 ° C) is used to work with products that require FDA standard or be in contact with food. Use of FEP jacket us stability limit range smaller than the PFA will remain stable up to 260 ° C temperature, further having the property of superior abrasion resistance and the pressure.

- **FKM O-rings encapsulated:** normally used as a static gasket, FEP and PFA provides excellent chemical resistance and body fluoroelastomer, flexibility that plastic does not have. Preferably we use the fluoroelastomer (-20 to +204 ° C), using its chemical resistance. Use of FEP jacket stability limit us a range of temperature below the PFA remain stable until the +260 ° C, further having the property of superior abrasion resistance and pressure.

  Gaskets FEP or PFA encapsulated with silicone and FKM, are used as seals both O format, square, rectangular, oval and closures Camlok type, whether in solid or hollow format.

  They are available in various standard diameters and the possibility of custom manufacturing.

O'RINGS KITS

O-ring kits are available in metric and inch sizes and with different compositions. Standards are NBR, but on request with MOQ, can also be supplied in FKM, EPDM or silicone.

Applications: Automotive, Mechanical Seals, Electronics, fluid seals, seals air valve, hydraulic seals, oil seals

Models:

- O-Ring box 5A – Inch – AS568 – NBR
- O-Ring box 5B – Inch – JIS – NBR
- O-Ring box 5C – Metrics – AS568 – NBR

O-RING CORD

We produce extruded **O-ring cord**; available in standard and special measures. We manufacture rubber cords from 1.5 mm. 100 mm. in various roll lengths (25m., 50m., 100m., 250m. and 500m.) depending on customer needs. You can also make cut pieces with vulcanized or glued joint from 1.5mm thick, upon request. Standard materials are:

- Acrylonitrile Butadieno NBR 70 Sh. A -30°C + 110°C.
- Silicona VMQ -60°C + 230°C.
- Vitón FKM -20°C + 200 ° C.
- Epdm -50°C +140°C

* Available in different harnesses

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SEALING SOLUTIONS

MOULDED GASKETS

CPI produces high quality moulded gaskets for compression or injection. Our company provides the most effective design, engineering and productions solutions to satisfy its most demanding applications.

Some of the materials used for our production:

- Ethylene-Propylene (EPDM, EP)
- Nitrile, buna-N (NBR)
- Styrene-Butadiene (SBR)
- Polyacrylate Acrylic (ACM)
- Epichlorohydrin (ECO)
- Chloroprene, Neoprene® (CR)
- Chloroprene, Neoprene® (CR)
- Hydrogenated Nitrile (HNBR)
- Ethylene Acrylic Elastomer (AEM)
- Silicone (VMQ)
- Viton®, Fluorocarbon (FKM)
- Fluorosilicone (FVMQ, FMQ)
- Hypalon ® (CSM)
- FDA approved
- Butyl (IIR)
- Natural Rubber (NR)
- Polyurethane (AU,EU)

DIE CUT GASKETS

Die cut gaskets for waterjet, blade or laser, and it allows us to satisfy all specifications of the products ordered.

CPI Sealing keeps a large inventory of raw materials allows us to offer our customers a response and quick delivery.

Following is a list of different types of materials used for die cut which our company manufactures.

- Rubber gaskets with graft fabric
- PTFE gaskets
- Flexible graphite gaskets
- closed cell sponge gaskets
- Natural rubber gaskets
- non-metalic gaskets
- Hypalon ®
- Silicone gaskets
- Viton® gaskets
- Kapton® gaskets
- Neoprene gaskets
- EPDM gaskets
- electrical insulators
- polyurethane gaskets
- High temperature gaskets
- Non-asbestos gaskets
- Sponge silicone gaskets
- Nitrile gaskets
- Filtration gaskets
- SBR gaskets
- FOAM gaskets
- Plastic gaskets
- Butyl gaskets
- Felt gaskets

PROFILES

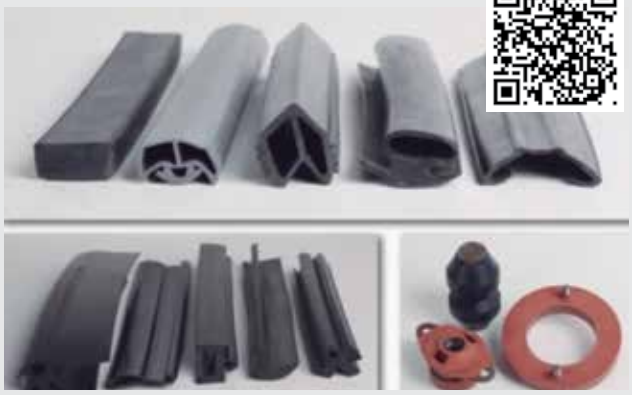
SILICIONE AND EPDM PROFILES

EPDM PROFILES

EPDM extrusion profiles in different colours and hardnesses.

Properties

- Good deformation resistance remaining for compression and to the spring back after the imposed deformation.
- Exceptional resistance to aggressive environments.
- Excellent weather resistance, to the UV rays and the humidity
- Excellent resistance to ozone
- Good heat resistance
- Very good resistance to low temperatures, -45°C to 120°C



FOAM RUBBER PROFILES

The profile extrusion process and foam weather-stripping or foam It allows us to supply any kind of form according drawings. There is the possibility to supply the piece cutting the profile according measures and with a finish of vulcanized or adhesive join.

CPI-PRODYSOL has wide range of foam products possibilities, offering different materials options in colours and harnesses.

They can be used as oven insulation joints, sealing gaskets, gaskets for the Lighting, food industry, automation, railway and all those applications that require a sponge material with very good thermal properties.

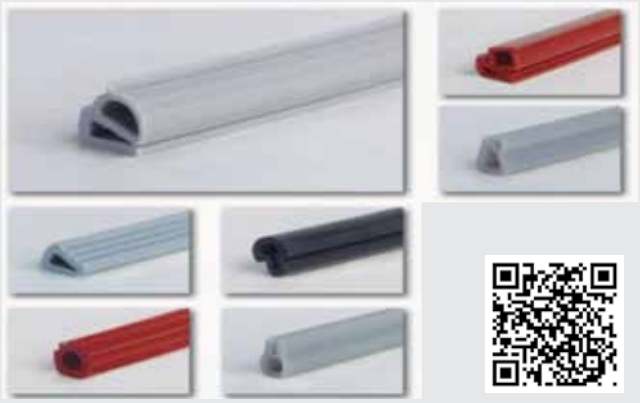
High temperature materials available (To +250°) Under the norm FDA CFR 21.177.1550

SILICONE PROFILES

Silicone profiles are produced with silicones of high strength in a wide range of Shore A hardnesses and colours according RAL or Pantone.

Properties

- innocuous, don't react with most chemical products, neither change original composition.
- Non-toxic, don't loose flavour, therefore does not pollute and deteriorate the products that have contact.
- Heat-resistant, capable to bear temperatures from -73°C to 220°C, keeping its elastic characteristics
- Elastic, with a percentage elongation capacity of 300 according the norm ASTM D3412
- Available according the norm FDA CFR 21.177.1550.



Other manufactured by extrusion

Rubber cord indicated for hydraulic sealing and pneumatics
Shaped sheath tubes for holstering rollers or similar sections.
EPDM gaskets for metal enclosures, PVC and wooden applications.
Low pressure compact tubes for water pipe, air, gasoline, oil, etc.
Indicated profiles for automation sector
Compact profiles for construction sector.
Perfiles compactos para el sector de la construcción.
Silicone tubes for liquid transportation.

*Other available materials: NBR, SBR, FKM

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PTFE PRODUCTS

PTFE SHEETS

Our companys produces sheets and films of pure PTFE and PTFE with fillers CPI-PTFE. They can be chemically treated on one side to apply an adhesive.

Application

Chemical containers soldiers, tanks, machinery, construction, transportation, railroad release material and production of sealing materials with different mixtures of materials to improve performance according to customer requirements.

Propiedades planchas PTFE

	Value	Unit	Norm
Density	2.10-2.30	g/cm³	ISO 12086
Hardness Shore D	52-60	Sh.D	DIN 53505
Tensile strength (23°)	25.42	N/mm²	DIN 53455
Elongation (23°)	250-400	%	DIN 53455
Traction (23°)	400-800	N/mm²	DIN 53457
Thermal expansion coeff. (20-100°)	12	1/K.105	-
Thermal expansion coeff. (150-260°)	16	1/K.105	-
Thermal conductivity (23°)	0.23	W/K.m	DIN 52612
Deformation after 24h at 23°C – 15	16	%	ASTM-D621
Deformation after 24h at 260°C – 4	7	%	ASTM-D621
Compressive force to 1% strain	4.3	N/mm²	DIN 53454
PV - Limit 3m/min	2.5	N.M/mm².min	-
PV - Limit 30m/min	3.9	N.M/mm².min	-
PV - Limit 300m/min	5.5	N.M/mm².min	-
Coefficient of friction - static	0.14	-	-
Use	78	Cm³.min/ kg.m.h	DIN53481

PTFE EXPANDED SHEETS CPI-EPTFEP

CPI-EPTFEP multidirectional expanded PTFE sheets; whose high malleability allows even seal the damaged flange ensures high reliability. Is suitable for most of the chemical applications

Expanded PTFE sheets are made of 100% fluoropolymer PTFE Polytetrafluoroethylene, without synthesizing, developed by a special process, which produces a multidirectional fibrillated microstructure, uniform and offers high resistance to deformation.

Key features

- 100% pure virgin PTFE.
- Improve creep resistance
- High compressibility and recovery.
- High compressive strength
- Universal chemical resistance.
- Wide temperatures range.

Applications

Is suitable for all sensitive pressure connections. Its use is suitable even with most aggressive chemicals. Appropriate for all applications governing highest purity. Extremely versatile for flanges connections, pressure vessels, chemical reactors and housings of pumps and compressors. Suitable as sewer gasket, heat exchangers and ventilation systems.

Benefits

Insurance escape, increased operational safety, seal damaged sealing flanges. Complies with FDA regulations.

MODIFIED PTFE SHEETS CPI-TGPTM

- **CPI-PTFEMP01 PTFE white modified with barium sulfate**
- **CPI-PTFEMP02 PTFE blue modified fiber**
- **CPI-PTFEMP03 PTFE red-brown modified silica**

PTFE PRODUCTS

PTFE TUBE/BAR

Virgin PTFE is a polymer having a structure consisting of long chains of carbon saturated fluorine. PTFE is a material is that it is virtually inert, does not react with other chemicals except in very special situations. This is basically due to the protection of fluorine atoms on the carbon chain. This lack of reactivity makes virtually zero toxicity, and is, in fact, the material with lower friction coefficient known. Another characteristic is its impermeability also keeping qualities in moist environments. It is also a great power and highly flexible insulator, is not altered by the action of light.

Characteristics

- Resistant to high and low temperatures (-180 °C - + 260°C)
- Corrosion and weather resistant
- High lubricated, no adhesion
- Non-toxic, non-flammable and antioxidant
- Resistant to acid and alkali (Except the molten alkali metals)

Applications

Battery electrodes, electrical products, lubricate the bearings, piston rings, oil seals, and other machinery, combining different materials to improve the performance of the desired area according to customer requirements.

Properties

	Value	Unit	Norm
Density	2.10~2.30	g/cm³	ISO 12086
Hardnes shore D	52 – 60	Sh. D	DIN 53505
Tensile strength (23°C)	25 – 42	N/mm²	DIN 53455
Elongation (23°C)	250 – 400	%	DIN 53455
Tensile Modulus (23°C)	400 – 800	N/mm²	DIN 53457
Thermal expansion coefficient (20-100°C)	12	1/K.10-5	-

PTFE WITH LOADS

PTFE produced by compression or extrusion process. There is the possibility of manufacturing different loads and colours.

Most usual compositions:

CPI-PTFEBF – PTFE with 40% Bronze y 60% virgin PTFE n

Properties	Value	Unit	Norm
Hardness	≥ 64-68	Shore D	ISO 868
Density	3.10~3.20	g/cm³	DIN 534790
Tensile strength	≥20	Mpa	ASTM D4745-79
Elongation at break	≥190	%	ASTM D4745-79
Work temperature	-180~250	°C	

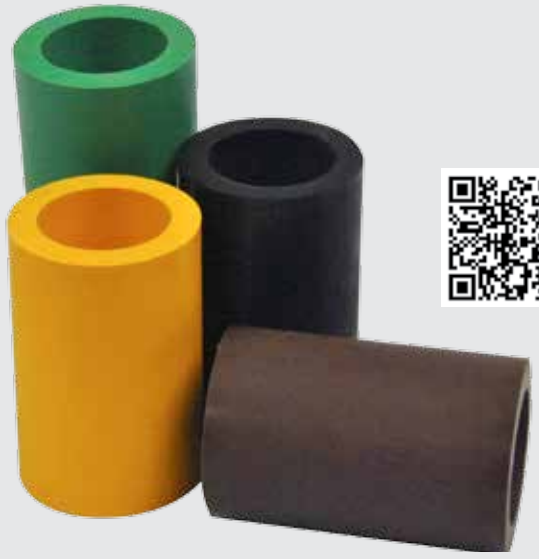
CPI-PTFEGD – PTFE with 15% fiberglass 5% MOS2 and 80% virgin PTFE

Properties	Value	Unit	Norm
Hardness	≥63	Shore D	ISO 868
Density	2.29	g/cm³	DIN 534790
Tensile strength	≥17	Mpa	ASTM D4745-79
Elongation at break	≥220	%	ASTM D4745-79
Work temperature	-180~260	°C	

CPI-PTFECD – PTFE with 20% carbon y 80% virgin PTFE

Properties	Value	Unit	Norm
Hardness	≥68	Shore D	ISO 868
Density	2.09	g/cm³	DIN 534790
Tensile strength	≥17	Mpa	ASTM D4745-79
Elongation at break	≥180	%	ASTM D4745-79
Work temperature	-180~240	°C	

*Other charges available: Copper, graphite, carbon fiber, black carbon. Consult other possibilities.



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PTFE PRODUCTS

PTFE FILM

Pure PTFE film and PTFE color film: Thk. from 0,03 to 1mm supplied in width from 5 to 1300mm.

It is used in mechanical applications such as sealing, pressure pads labeling machine, linings, antifriction devices, bearings, forming dies, molds release guide, where high temperatures, the maximum displacement and lubricity are required.

SANDWICH CPI-SW

They are gaskets appropriate for different media. It can be used for a wide range of applications in such fields as chemical, petrochemical, pharmaceutical, food products and industries in general.

ADVANTAGES

Thanks to the high stability of virgin PTFE, which is used for the gasket, exhibits excellent chemical resistance. Combinations of materials allow insertion many applications.

PTFE BEARING

CPI-PTFEA It is produced with PTFE resins highly resistant molding process, sintering and with possibility of varying sizes. Different fillers can be used to supply under requests. It can also adhere to the rubber and metal with specific treatment in the face of adhesion.

CPI-PTFEA with very low friction coefficient, it is anti-corrosive and does not age, it can be used at a temperature of -180 / + 260 ° C.

TREATY PTFE

PTFE treated on one side that allows adhesive it, what it gives the ability to adhere to different surfaces. Typical applications include coating of tanks, reservoirs and other equipment used in caustic environments.

When it is necessary to perform the adhesive process, this product is the most appropriate. To carry out the said finishing is used sodium ammonia which is formulated to create a bondable.

Once finished the process, you can easily paste a coating chemical process tanks or other equipment used in caustic environments.

Adhesive is possible one or both sides of the sheet according to the needs demanded.

- **Min. Thickness:** 0.1mm
- **Standard width:** 1m, 1.2m, 1.5m, 1.8m, 2m
- **Maximum thickness:** 0.1 mm, 50 mm (consult other)

CPI-PTFE ST

CPI-PTFE ST It consists of a perforated stainless steel insert and closed PTFE uniform manner. The joints known as Stainless steel lined has mechanical properties that give it a pressure-temperature and exceptional chemical characteristics. In extreme applications are highly recommended for use instead of PTFE washers. CPI-PTFE ST they are available in standard and custom sizes. PTFE virgin + stainless steel insert.

- Auto lubrication and inert to most chemicals
- Available in DIN / ASA standard.
- Low permeability and water absorption
- Temperature range: -200 ° C / + 250 ° C
- Resistant up to 100 bar pressure

PTFE PRODUCTS

PTFE ROLLS SELF-ADHESIVE CPI-EPTFER

CPI-EPTFER is a self-adhesive material produced of 100% pure expanded PTFE. It fits almost any sealing surface. The CPI-EP adhesive tape makes quick and easy installation.

Advantages

- Is installed quickly and easily
- Is chemically inert and is resistant to high temperatures.
- It is the ideal material for, complex and damaged surfaces.

Applications

- Gaskets for all types of flanges
- Ideal for housings pumps, compressors, etc.
- Cover gasket for various containers
- Suitable gasket for artificial holes, ventilation systems, heat exchangers, etc.
- For stress-sensitive joints where only a low load may be applied to the flange.

PTFE O-RINGS

Manufacturing by mechanization and mold, sliding the market, with resistance to high temperatures and resistant to most chemicals material.

- High chemical stability
- Low friction coefficient
- Nonstick
- High quality and competitive price

Product Features

Compared to other plastics, it has better corrosion resistance and excellent heat resistance. Among the known plastics, PTFE has the best resistance properties to chemical corrosion and dielectric properties. The range of working temperature ranges from -180 ° C - + 260 ° C, has one of the lowest coefficients of friction.

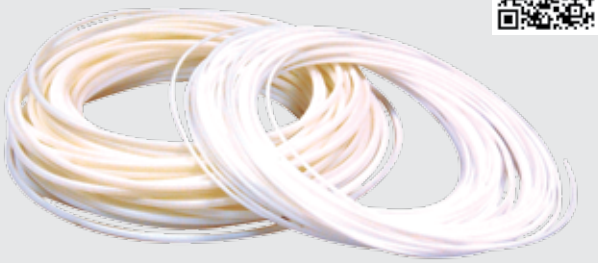
PTFE TUBE

The properties of the PTFE tube make them one of the most versatile and most likely existing market practices pipes.

The PTFE tube it may be opaque or translucent. Possibility of manufacturing in color according to the needs demanded.

Properties

- High and low temperature resistance
- Corrosion resistance
- Weather ability
- High lubrication
- No adhesive
- Not toxic
- Fire resistance



PTFE TAPE

CPI-PTER It is a tape for sealing threads having good tear resistance. The tape is chemically inert and seals most metal pipes and threaded bolts and plastic. Does not react with steam, water and some light solvents

Characteristics

- Composed of materials 100% PTFE
- Not harden and is chemically inert
- Resistant to water, air, steam, gas, hydrocarbons, ammonia and nitrogen
- Temperature: -190°C - +280°C
- Transparent packaging 10 units

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GASKETS AND SEALS FOR LIGHTING

CPI electronic





CPI Sealing specializes in the manufacture of profiles and die-cut and moulded gaskets for the lighting industry. We manufacture custom gaskets and seals for lighting products, for waterproof lights, wall lights, ceiling lights, LED lighting, panel lights and fluorescent among others.

We have over thirty years of experience working closely with our customers to provide them design more effective, engineering and sealing solutions to meet their requirements and obtain the required IP.

We provide long term weather protection, reducing heat buildup and extending the life and performance of the lighting products. The gaskets and profiles have excellent characteristics of compression set, together with a high resistance to long term to seal effectively.

The main cause of lighting failures is rapid changes in the external temperature changes which can cause pressure inside the luminaire. If the internal pressure is not equalized, the resulting vacuum in the conditions affect internal work, which increases eventually causing condensation lighting unit, fails. Water, dirt and dust can also degrade the performance of the lighting unit.

Materials, gaskets and profiles for lighting

CPI Sealing maintains a wide range of materials that meet UL / VO or regulations are equivalent. They are also suitable for insulation requirements for most lighting applications obtaining the necessary IP. The most common materials used to manufacture lighting gaskets and seals are listed below.

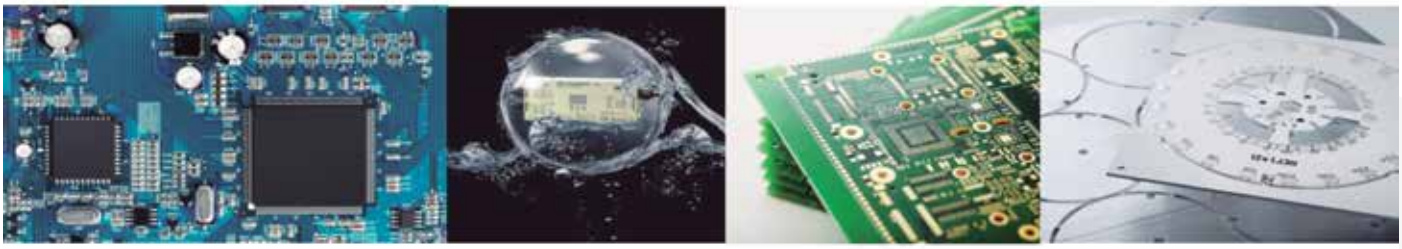
- Open and closed cell sponge rubber (UL Listed)
- Neoprene closed cell (UL94F - 1)
- Foam rubber (UL94HF)
- Polyurethane foam
- Poron® foam (UL Listed)
- Silicone foam (UL 94V-0)
- Polyethylene foam
- Nomex® (DuPont ™)
- Formex y Statex ™
- Voltoid®Materials
- Fishpaper UL 94V-0
- EPDM (ethylene propylene diene monomer)
- Silicone rubber
- Nitrile (Buna-N)
- SBR (styrene-butadiene)
- Neoprene® (chloroprene)

*Most lighting boards are available with adhesive






JOINTS INSULATION AND PROTECTION FOR ELECTRONICS INDUSTRY



Manufacture of high quality dielectric joints, insulators and protections for the electronics industry.

Our main goal is to continually exceed the expectations of our customers by providing high performance gaskets and sealing products at competitive prices.

Extensive experience in the manufacture of die cutting, blade, water jet and laser cutting. We can also offer numerous secondary operations including pre-cutting, folding, bending, embossing, printing and pressure sensitive adhesive (PSA) to meet their manufacturing needs.

CPI Sealing has the ability to produce high quality components, custom parts, which are used in applications such as:

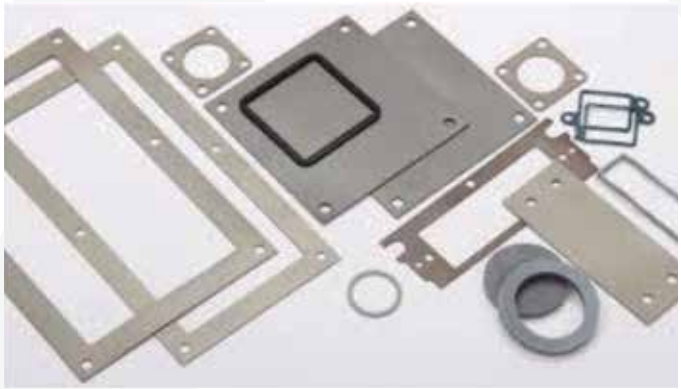
- PCB
- Keyboards
- Lighting devices
- Telecommunications (Mobile Devices)
- Static shield
- EMI RFI armor
- Electronics devices
- Electrical controls
- LCD screens
- Power Supplies
- Heat dissipation
- Antistatic insulation
- Electronic instruments
- Electrical enclosures

We offer high performance parts that meet UL, chemical resistant insulation. We work closely with customers to create electrical components tailored to meet your exact specifications.

Electrical insulation materials

We maintain a complete line of electrical insulation materials. We manufacture electrical insulators, such as; packing's, gaskets, washers, strip and custom parts. The electrical insulation materials are available in a wide range of thicknesses, hardness, density, and colors. Most insulating materials are available with or without pressure sensitive adhesive (PSA). The most commonly used insulating materials are:

- Mylar® (Polyester)
- Kapton®
- Nomex®
- Fish Paper®
- VHR-115®
- Hitex®
- Valox®
- Teflon® (PTFE)
- Formex® GK
- Statex®
- Ragtex®
- E-FR®
- Berquist®
- Lexan® Polycarbonate
- Phenolics (CE, LE, G10/FR4)
- Fiberboard



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