Hi-Tech Seals

General Product Listing

Our Vision

Provide superior value to our customers.

Our Mission

Supply quality products delivered on time, at a competitive cost, backed by a knowledgeable team of sealing professionals, so our customers may grow and prosper.

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Hi-Tech Seals

Introduction

For over 35 years, Hi-Tech Seals has been recognized as a leader in the distribution and manufacturing of industrial seals, gaskets, metal components, elastomer and plastic solutions. We continually invest in new and innovative products, materials, and services with the intention of helping our customers grow and prosper in an ever-changing world economy.

We offer a personal solution to the business world, tailoring our business relationship to reflect the needs of our clients. We work alongside a variety of industries while maintaining a high standard for all our products and services. Our diverse supply chain allows our customers to be confident we will provide a solution that meets and exceeds their specifications.

Markets We Serve

- Aerospace
- Agriculture
- Automotive
- Chemical Processing
- Construction
- Consumer Products
- Fluid Power
- Food & Beverage
- Forestry
- HVAC & Refrigeration
- Hydrogen
- Industrial Manufacturing
- Industrial Supply and Distribution
- Instrumentation
- Marine
- Medical
- Metal Machining
- Mining
- Oil & Gas
- Pharmaceutical
- Pipeline
- Plumbing
- Power Generation
- Pump & Valve
- Renewable Energy
- Research Education
- Technology
- Transportation
- Utilities
- Wastewater

Strategic Partner of Carco Seal Group

Our strategic partnership with Carco Seal Group, a global leader specializing in the design and manufacture of seals for over a century, enables us to expand our product portfolio and offer customers a wider range of solutions worldwide. This partnership enhances our distribution channels and provides access to a vast network of partners, leveraging our positioning to provide the technical support and diverse solutions our customers need.

CARCO® prp®
SEAL GROUP

Introduction

ISO 9001 Registered Quality Management System

At Hi-Tech Seals, we are committed to our Quality Management System (QMS). Our first branch registered under an ISO QMS in 1996. Our branches are registered under the ISO 9001:2015 Quality Management System, and we remain committed to registering new branches as we grow. The three main goals of our policy include:

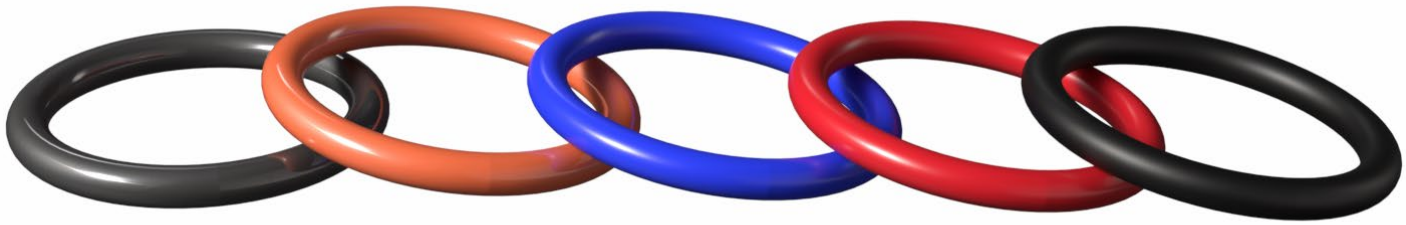
- Hi-Tech Seals shall distribute and/or manufacture a quality product that will meet our customers' expectations and applicable requirements.
- Hi-Tech Seals shall commit to quality objectives agreed upon by senior management, identified through a holistic and collaborative approach involving all potential stakeholders.
- Hi-Tech Seals shall strive to continually improve the Quality Management System (QMS) effectiveness based on efficient processes, well-defined measurements, and best practices.

Compliance and Certification

Hi-Tech Seals provides high-quality materials that comply with rigorous criteria established by the most respected regulatory bodies. This includes compliance with standards and regulations, and customer-specific requirements and standards.

- API 6A
- NORSOK
- UL listed
- NACE
- TOTAL
- NSF
- ISO
- AS
- MIL Spec
- FDA
- USP Class VI
- 3A

These compliance and certification logos can be found on the Hi-Tech Seals technical data sheets.



O-Rings

O-rings are the most widely used seal in history due to their simplicity, low cost, ease of installation, and small space requirements. The seals versatility enables them to be used in thousands of applications across a multitude of industries and markets. O-rings are designed for both static and dynamic applications and can be used as a double acting seal.

A properly designed O-ring groove allows the O-ring to be squeezed diametrically out of round, even before the application of pressure. The O-ring seals by distortion of its resilient elastic compound to fill the leakage path. As the name suggests, the O-ring has a circular profile.

We stock an extensive inventory of imperial and metric size O-rings. Custom sizes are available through our in-house splicing and vulcanizing service. They are also available in:

- Quad Rings
- Square Cut Rings
- PTFE Colour Coated O-Rings
- FEP/PFA Encapsulated O-Rings

Our O-rings are available in a wide range of materials and durometers to meet diverse application requirements.

Materials include:

- Nitrile
- Low Temperature Nitrile
- Hydrogenated Nitrile
- Viton™/Fluorocarbon
- Low Temperature Viton™/Fluorocarbon
- Kalrez®
- Ethylene Propylene (EPDM)
- PTFE
- Silicone
- BoKure™ Urethane
- Neoprene/Chloroprene
- Fluorosilicone

Cords

Cord is a cost-effective solution for sealing non-standard and large diameter static applications when standard moulded seals are not available or suitable. They are available in both O-ring and square profiles, with quad rings available upon request. Cord is sold by the foot.

Custom cord can be manufactured in virtually any size through our in-house splice and vulcanize manufacturing. Cord is supplied in multiple cross sections, and in various materials including but not limited to:

- Nitrile
- Hydrogenated Nitrile
- Viton™/Fluorocarbon
- Aflas® FEPM
- Ethylene Propylene (EPDM)
- Neoprene/Chloroprene
- Silicone
- FDA-compliant materials

See page 32 for more information about spliced and vulcanized manufacturing.

O-Ring

Quad Ring

Square Cut Ring

Back-Up Rings

Back-up rings are plastic or rubber rings used to prevent the O-ring from entering the clearance gap. When high pressures are exerted on the O-ring, the soft rubber material can be forced into the clearance gap, causing the O-ring to extrude.

The hard back-up ring material will keep the O-ring material from flowing into the gap, which will prevent premature failure.

Our back-up rings are manufactured from standard and high-performance elastomer and plastic compounds. We offer an assortment of back-up ring profiles including solid flat, solid contoured, scarf cut, spiral cut, and butt cut. Close tolerance rings are available upon request.

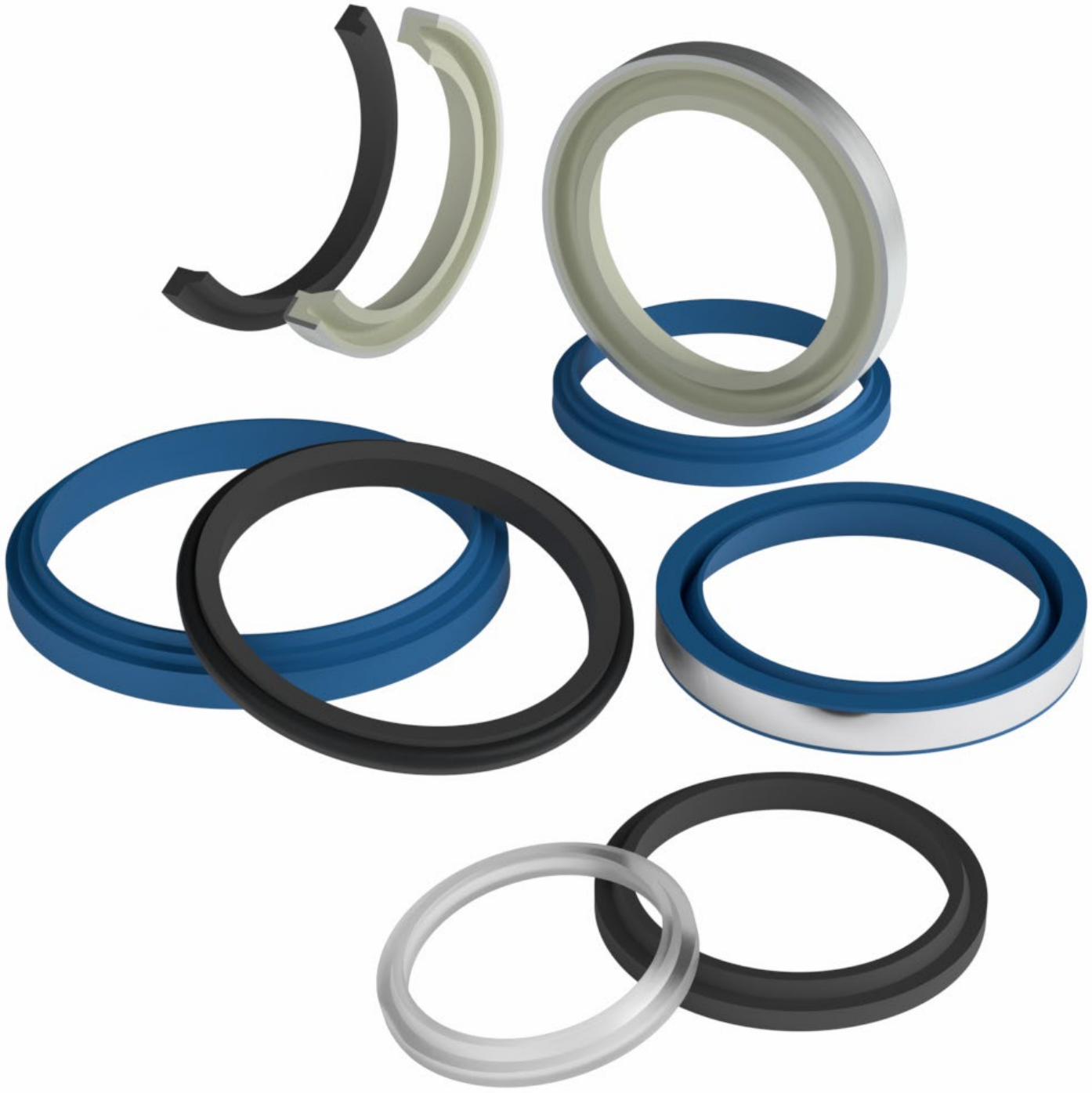
Our KasPex™ PEEK MP39 is commonly used in high-pressure and high temperature applications. Other materials include:

- Other KasPex™ PEEK compounds
- BoKure™ Urethane
- Nitrile
- PTFE
- Viton™/Fluorocarbon
- Hytrel®

Wipers

Wipers are primarily designed to stop contaminants from entering a cylinder on the rod, however, they can also act as a secondary rod seal. If contaminants were to enter a cylinder it could lead to damage of the rod and/or other sealing components. A properly selected wiper could help reduce the need for unscheduled maintenance and even increase the time between maintenance cycles.

It is important to select the correct style and material for an application. Our standard wiper material is urethane, however, nitrile, hydrogenated nitrile, Viton™, PEEK, and Hytrel® wipers are available. When selecting the material for a wiper remember to consider: required abrasion resistance, elasticity, resilience, and fluid compatibility.



Wear Rings and Wear Strips

Wear Ring

Wear rings are precision-engineered to help keep the piston and rod centred and prevent metal-to-metal contact between components. This allows for even wear and pressure distribution on the seals. They are available in various applications. Our standard wear ring material is glass reinforced nylon.

Wear Strip

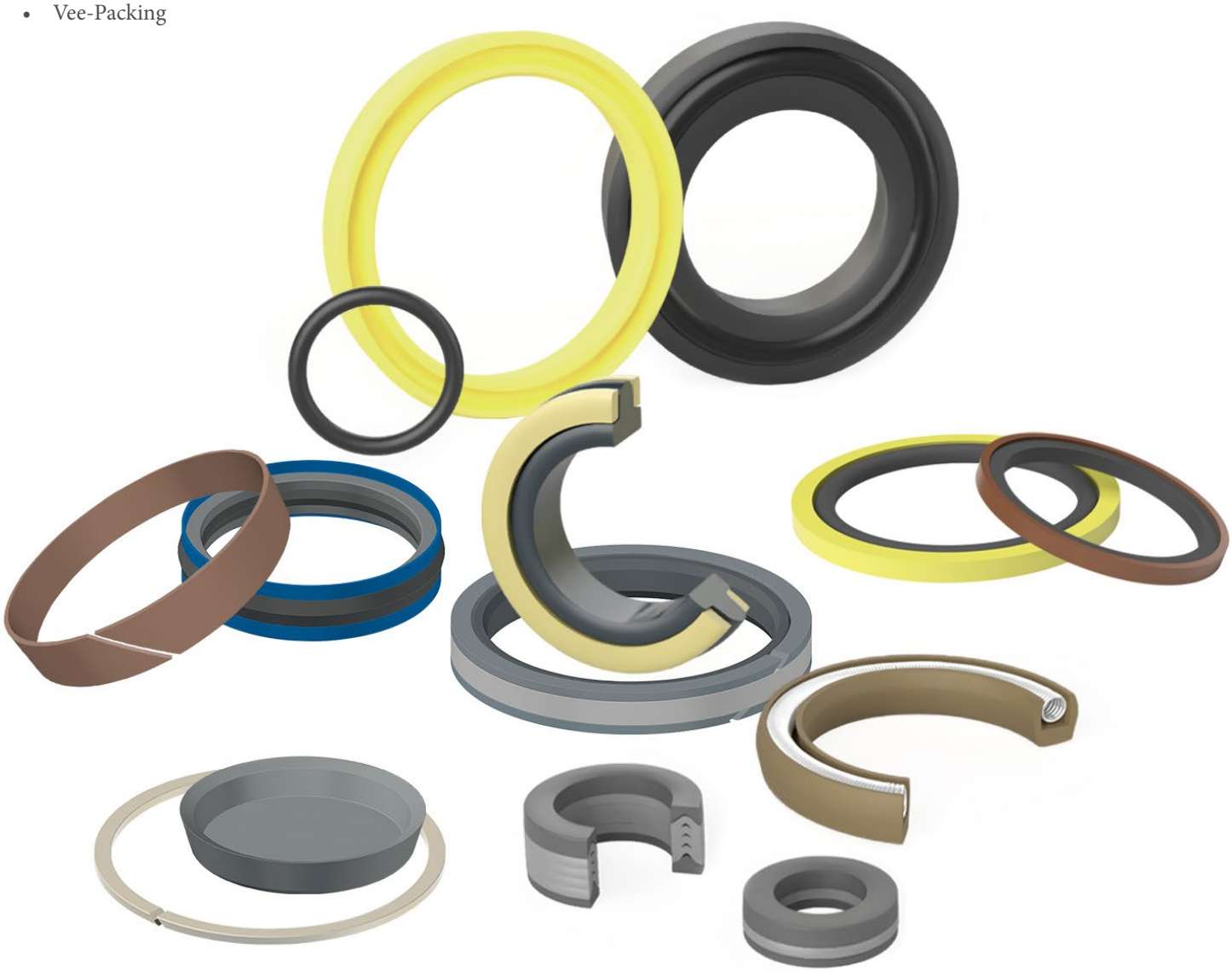
Wear strip, also known as guide strip, is an economical alternative to wear rings, but has looser tolerances. They are available in cut-to-length in any size or bulk strip. Our standard wear strip material is bronze-reinforced PTFE.

Piston Seals

Piston seals are critical components in hydraulic and pneumatic cylinders, forming an effective seal between the piston and the cylinder bore. These seals prevent fluid leakage and ensure smooth piston movement, supporting reliable system performance.

Selecting the right piston seal involves choosing the appropriate seal profile and material while considering operating conditions such as speed, temperature, pressure, and media compatibility to meet the specific demands of the cylinder application.

- O-Rings
- Back-Up Rings
- Wear Rings
- Crown Seals
- Fluid Seals
- Modular Bearings
- PIP Rings
- T-Seals
- Vee-Packing
- Piston Cups
- Piston Rings
- Loaded U-Cups
- Unloaded U-Cups
- Homogeneous U-Cups
- Capped T-Seals
- Head Seals
- Spring Energized Seals



Rod Seals

Rod seals are used in hydraulic and pneumatic cylinders to prevent fluid from leaking as the piston rod moves in and out of the cylinder. They create a tight seal against the rod, allowing smooth movement while keeping pressure contained.

Selecting the right rod seal involves choosing the appropriate seal profile and material while considering operating conditions such as speed, temperature, pressure, and media compatibility to meet the specific demands of the cylinder application.

- O-Rings
- Back-Up Rings
- Wear Rings
- Crown Seals
- Buffer Seals
- Modular Bearings
- PIP Rings
- T-Seals
- Vee Packing
- DZ Seals
- Loaded U-Cups
- Unloaded U-Cups
- Homogenous U-Cups
- Head Seals
- Spring Energized Seals

Rotary Shaft Seals

Rotary seals are designed to seal media under rotating movements. They are subjected to a combination of velocity and pressure, which creates a high-wear environment. Due to the combination of these two forces acting in unison, the seal's environment must be carefully evaluated to ensure that both factors are taken into consideration when choosing the appropriate solution.

Our team of technical professionals has a wealth of experience with rotary applications. After examining the application's operating condition, we can provide a superior sealing solution to optimize application performance.

Common rotary seals include:

- Braided Packing
- Oil Seals
- Spring Energized Seals
- V-Seals
- Mechanical Seals
- Mechanical Face Seals
- Cassette Seals

Gaskets

Hi-Tech Seals offers an extensive inventory of gaskets and related products. For more information on our Rapid Gasket manufacturing capabilities and available sheet materials, please refer to page 27. Our range of gasket products includes:

- Custom-Cut Gaskets
- Ring Type Joint Gaskets
- Rubber Coated Test Gasket
- Urethane Ring Type Joint Test Gaskets
- Spiral Wound Gaskets
- Pipe Flange Gaskets
- Sanitary Clamp Gaskets
- Kammprofile Gaskets
- Camlock Gaskets
- Graphoil Ribbon
- Graphoil Rings
- Bonded Washers
- Washers
- Hammer Union Seals & Protectors
- Braided Packing
- Rubber Extrusions
- Joint Sealant

Gaskets - Accessories

Isolation Kits

Isolation kits provide near-zero leakage while protecting a flange against corrosion caused by the transfer of electricity. Isolation gaskets are manufactured in accordance to ANSI B16.5 specifications for sizes up to 24". Kits are available with Trojan and Integra® high-performance gaskets, isolating sleeves, washers, or one-piece sleeve-washer units.

Anodes & Pigtails

Anodes are used in a variety of cathodic protection solutions. They are highly active metals that are used to prevent a less active material surface from corroding. Hi-Tech Seals Gasket Division offers both heater treater anodes and packaged anodes.

Pigtails are 12 gauge copper coated wire that is coiled with connectors on both ends. One connector is attached to the insulating head, and the other is attached to an electrical source. This allows the pigtail to carry a current and electrically charge the anode.

Mud Plug Kits

Other gasket-related product offerings include:

- Studs & Nuts
- Bolts
- Redline Gauge Glass
- Toolbox Gasket Packs
- Tank Stripping
- Fillet Strip
- Chime Lap Gaskets
- Boiler Gaskets
- Screw Packing
- Fiberglass Tape
- Mud Plug Kits
- Pipe Rollers

Metal Components

Hi-Tech Seals supplies high-quality metal components that are available in both standard and custom designs to meet specific application requirements. Partnering with Hi-Tech Seals streamlines procurement by consolidating sourcing into a single purchase order rather than managing multiple suppliers. Customers rely on Hi-Tech Seals for proven quality, responsive service, and a trusted source for metal components solutions.

Examples of metal components include:

- Carbide Parts
- Dry Slide Bearings
- Spherical Plain Bearings
- Belleville Disc Springs
- Bonded Washers
- Washers
- Retaining Rings
- Studs and Nuts
- Bolts
- Rock Bit Balls
- Custom Steel Components
- Brass Filters, Shear Pins, Plugs
- Ball Bearings

Custom Moulded Products

We specialize in custom moulded products for a wide range of industrial applications, delivering high-performance solutions through a collaborative process with customers from design to production. Custom moulded products are elastomer components engineered to meet precise and application-specific performance requirements that standard manufacturing methods cannot achieve.

Advantages of Custom Moulded Products:

- Accommodates complex geometries with tight tolerances for precise application fit
- Wide range of material options to suit various operating environments and performance requirements
- Advanced bonding capabilities, including bonding to other materials such as metal and PTFE

Examples of custom moulded products include:

- Mud Motor Boots
- Inner and outer BOP Seals
- Packoff Oil Savers
- Centralizer Fins
- Diaphragm
- and more custom solutions

See page 31 for more information on custom moulded manufacturing and available materials.

Tools & Accessories

Brass O-Ring Pick Sets

Our brass O-ring pick set is an ideal method to remove O-rings without damaging the seal or the associated components. The brass tips prevent scoring and scratching of critical material surfaces. This two-piece set offers four different pick-end styles.

U-Cup Installation Tools

U-Cup installation tools bend the seal, allowing it to safely move past threads and other glands. Installation tools can save time as well as help avoid damaging seals during the assembly.

Braided Packing Extractor

Braided packing extractors use a cork screw hook to grip the compressed packing. Once gripped, simply pull on the handle to remove the packing. The extractor is sold in a three-piece set.

PTFE Tape and Polyimide Tape

PTFE tape is an ultra-thin material typically used to seal pipe threads. The material provides near-universal chemical resistance. Polyimide Tape is an excellent tape material for applications with temperature extremes. It can be used in temperatures up to 260°C/500°F and as low as -269°C/-452°F.

O-Ring Cone and Pi Tape

O-ring cones are ideal for measuring standard AS-568 O-rings. It measures 184 widely used O-ring sizes with inside diameters from 1/4" thru 5-5/8" in five standard cross-sections. Pi Tape determines the imperial or metric size of an O-ring. The cross-section or series can be determined using the cross-section graph at the top of the tape. Then, unwind the Pi Tape on the inside diameter of the O-ring to determine the imperial or metric number.

Durometer Tester - Shore A & Shore D

Both hardness testers measure rubber and plastic hardness according to ASTM D2240, DIN 53505, ISO 868, and ISO 7619. Shore A tester measures very soft to exceedingly hard components with almost no flexibility. Semi-rigid thermoplastics can also be measured on the high end of the Shore A scale. Shore D tester is used to measure semi-rigid to hard rubbers and plastics.

Tools & Accessories

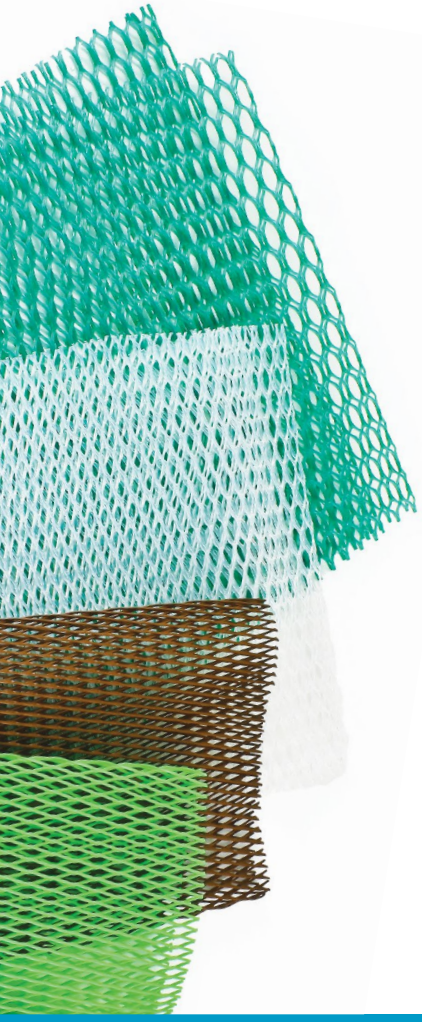
Thickness Gauge

Our thickness gauge is designed for quick and efficient measurement of small dimensions. The gauge is able to measure components between 0 and 0.5” (12.7mm) within a tolerance of ± 0.0005” (0.01mm).

Vibration Mounts

Vibration mounts reduce the noise and vibration produced by equipment. They enhance the equipment's reliability by reducing wear and extending the machine's lifespan. Vibration mounts can help comply with vibration and noise regulations, protecting individuals from potentially harmful noise levels and improving working conditions.

Hi-Tech Seals also distribute Paulstra foams for noise reduction, isolators, special shaft seals, and more.



Protector Products

Our protector products offer excellent protection for equipment against damage, dirt, and moisture that may occur during storage or shipping. Hi-Tech Seals' cast urethane division can manufacture custom thread protectors to meet our customers' needs. Other protector products we offer include:

- Caps & Plugs
- Tool Joint Protectors
- EUE
- Sucker Rod Caps & Plugs
- Hydraulic Fittings
- Flange Protectors
- Sleeve Mesh
- Valve Flange Protectors
- Custom Thread Protectors

Our protectors are available in the following styles:

- Open Ended
- Close Ended
- Threaded
- Non-Threaded

SUPER Hi-Glyde™
O-Ring Lubricant

Super Hi-Glyde™ is our silicone-based lubricant with a low coefficient of friction. It helps protect O-rings and seals from ozone degradation, cracking, abrasion, cutting, and pinching. Its excellent adhesion to metal, rubber, and plastic materials prevents the lubricating film from being washed away due to fluid action in the system.

This lubricant has high resistance to wear, pressure, rust, and corrosion. Super Hi-Glyde™ exhibits great thermal stability, does not cure, and can operate in temperatures ranging from -55°C to +250°C (-67°F to +482°F).

MOLYKOTE®

MOLYKOTE® Specialty Lubricants is a trusted name in high-performance lubrication solutions, offering premium products designed to reduce friction, improve efficiency, and provide long-term protection for a wide range of industrial applications.

Our MOLYKOTE® offerings include:

- O-Ring and Seal Lubricants
- Thread and Fastener Lubricants
- Multi-Use Greases
- Anti-Friction Coatings

MOLYKOTE® 111

MOLYKOTE® 111 is a high-consistency, non-curing sealant designed to protect O-rings and seals while delivering excellent lubrication. Recommended for static to slow-motion applications, it offers high adhesion, outstanding water and fluid resistance, and strong compatibility with elastomers and plastics.

MOLYKOTE® 55

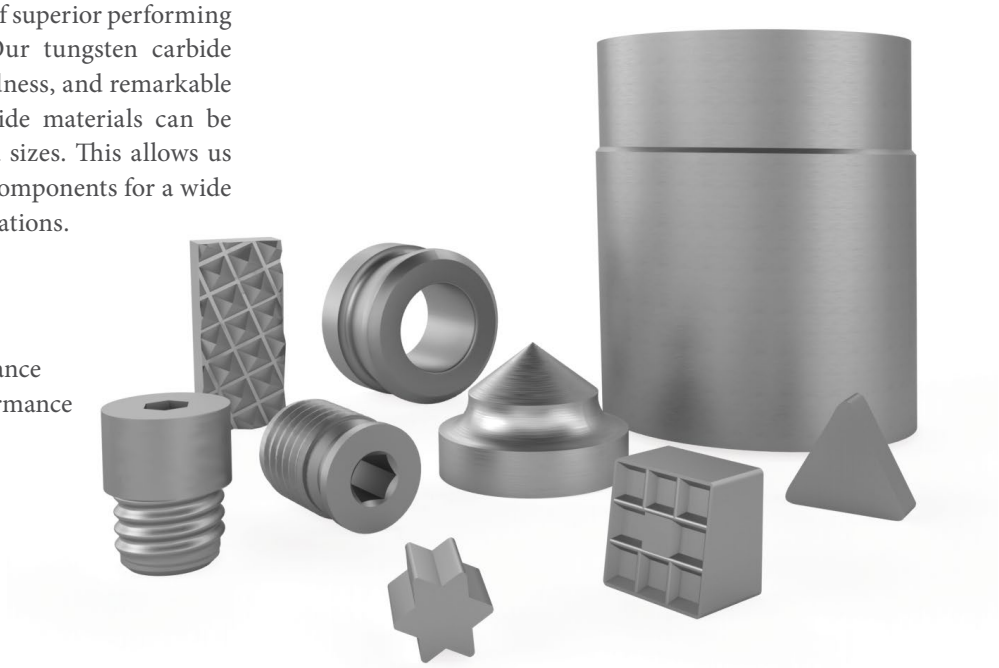
MOLYKOTE® 55 is a medium-consistency lubricant formulated for dynamic applications, delivering reliable performance for O-rings and seals. It provides excellent elastomer-to-metal lubrication and offers good compatibility with many elastomers. It has strong resistance to corrosion and oxidation.

MOLYKOTE® 3451

MOLYKOTE® 3451 Bearing Grease is a high-performance lubricant designed to keep bearings lubricated. It delivers outstanding resistance to chemicals, solvents, fuel, and water. With outstanding rubber and plastic compatibility, high load-carrying capacity, and excellent performance across both low and high temperatures.

WolCar™ Carbide

WolCar™ carbide is Hi-Tech Seals' family of superior performing cemented tungsten carbide materials. Our tungsten carbide compounds offer extreme toughness, hardness, and remarkable wear resistance. Finished WolCar™ carbide materials can be manufactured into the desired shape and sizes. This allows us to provide our customers with precision components for a wide range of industrial and commercial applications.



WolCar™ carbide advantages:

- Superior strength and toughness
- Exceptional wear and abrasion resistance
- Outstanding high temperature performance
- Low coefficient of friction
- Excellent chemical resistance
- Highly resistant to deformation

TechCera™ Ceramic

TechCera™ ceramic is Hi-Tech Seals' family of superior performing advanced ceramic materials. Our ceramic components are lightweight, exhibit excellent mechanical properties, and extreme hardness. They offer remarkable resistance to corrosion, wear, chemicals, and abrasion. TechCera™ ceramic compounds retain their properties in various extreme environments. Hi-Tech Seals offer both hot isostatic pressed (HIP'd) and cold isostatic pressed (CIP'd) TechCera™ ceramic compounds.

TechCera™ ceramic advantages:

- Extreme hardness
- Excellent insulating properties and non-conductive
- Great resistance to erosion and wash
- Exceptional mechanical properties
- Superior wear resistance
- Good thermal conductivity
- High mechanical strength
- Low coefficient of friction

High-Performance Materials

KasPex™ PEEK

KasPex™ PEEK is Hi-Tech Seals' family of high-performance thermoplastic PEEK. These compounds provide durability in harsh chemical environments, excellent mechanical strength, and remarkable dimensional stability. They improve the performance and reliability of machined parts in countless applications across an endless number of markets and industries.

KasPex™ PEEK advantages:

- Outstanding chemical resistance
- Superior high temperature performance
- Exceptional wear & abrasion resistance
- High electrical integrity
- Excellent hydrolysis resistance

BoKure™ Urethane

BoKure™ urethane Hi-Tech Seals' family of high-quality urethane materials. It is a great alternative to rubber, plastic, and metal components or where wear, impact, and corrosion are a concern. BoKure™ offers outstanding properties that help customers save money by extending product longevity and increasing equipment runtime.

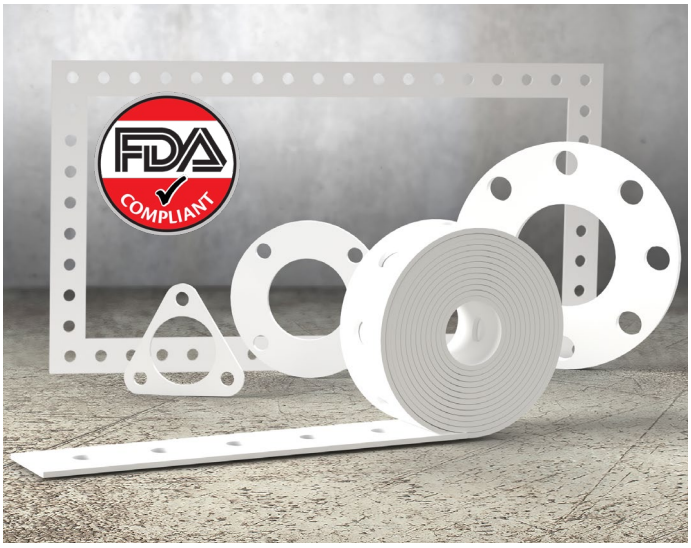
BoKure™ Urethane Advantages:

- Superior abrasion and impact resistance
- Exceptional load bearing ability
- Excellent cracking and tear resistance
- Outstanding performance in elevated temperatures
- Remarkable low-temperature flexibility
- Outstanding resistance to a wide range of chemicals

See page 29 for more information on BoKure™ Urethane and our cast urethane manufacturing division.

RyFlor™ ePTFE

RyFlor™ expanded PTFE is our specialty, high-performance gasket material. It offers remarkable chemical compatibility, a wide temperature range, and withstands extreme and aggressive challenges in the field. Common sheet thicknesses include ¼", ⅛", and 1/16". RyFlor™ solutions are available in standard and custom cut gaskets, material strips, and joint sealant.

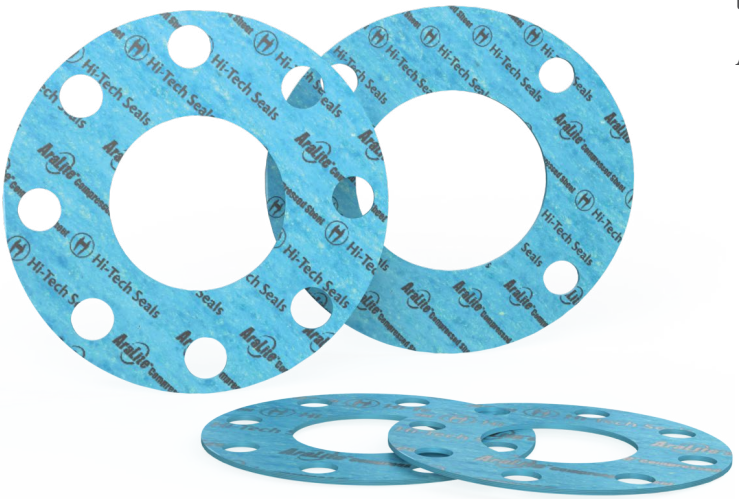


RyFlor™ advantages:

- Ability to seal imperfect flange surfaces without experiencing deformation
- FDA compliant
- Substantially increases service life of gasket
- Resistant to UV and ozone
- Withstands loads over 40,000 psi
- Excellent chemical resistance
- Low compressive creep under extreme conditions

AraLite™ Compressed Sheet

AraLite™ is Hi-Tech Seals', high-quality, cost-effective, general-purpose sheet material. It is composed of high-strength aramid and inorganic fibres, reinforced with a nitrile binder. AraLite™ exhibits an outstanding combination of thermal, mechanical, and chemical properties that help maintain critical applications and save customer's valuable time.



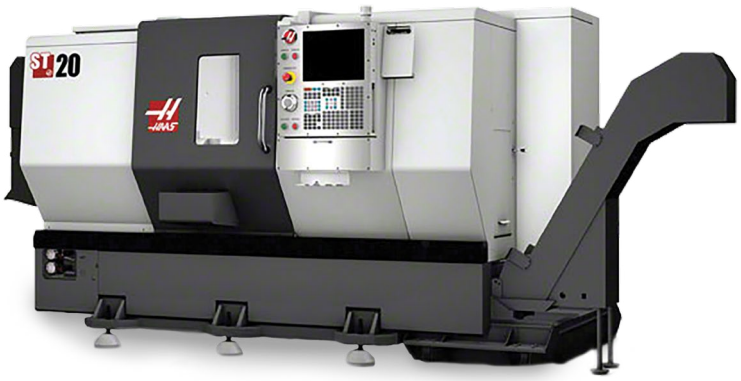
Our quality general-purpose gasket material is excellent for use in oil, hot and cold water, steam, natural gas, new generation refrigerants, and many other liquids and gases. It helps ensure leak-free performance and prevents costly fluid and gas losses. AraLite™'s high compressibility allows it to conform tightly to irregular surfaces, accommodating various machinery and equipment. Its exceptional sealing capability makes it suitable for various applications, such as treaters, pipelines, flanges, pumps, and compressors.

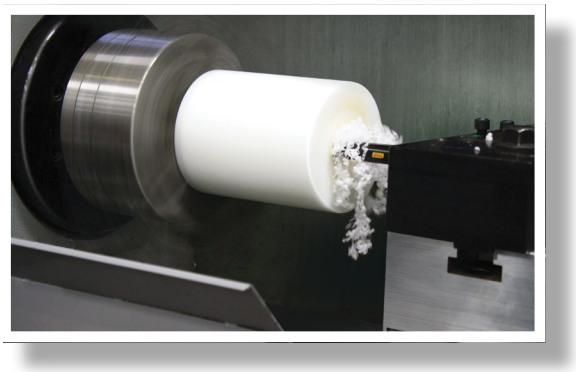
AraLite™ compressed sheet advantages:

- Excellent sealing capability
- Good compressibility and recovery
- Remarkable thermal resistance
- Superior mechanical and chemical properties
- Exceptional performance in connection with gas
- Excels in a wide range of applications
- Wide temperature range

Rapid Seal

Rapid Seal is our in-house elastomer and plastic machining service. Our team of sealing professionals can quickly design and manufacture new, replacement, and prototype components that meet our customers' needs. Customers can select from standard pre-programmed profiles or collaborate with our professionals to design a custom component. Machined parts can save companies time, money, and the inconvenience of searching for difficult-to-find parts.





Rapid Seal advantages:

- Quick turnaround times
- No minimum quantities
- Extensive stock of elastomer & plastic billets and tubes
- Over 150 pre-programmed profiles
- Custom-designed solutions to customer specifications
- Access to engineering and drafting services

Rapid Prototyping

During the development stage of new components, typically multiple design revisions are required. Rapid Seal allows us to quickly machine prototype parts for our customers without the costly tooling associated with moulded prototypes.

For lower durometer parts, we carry billet and tube stock of select materials as soft as 70 Shore A durometer. The softer material enables our customers to receive a prototype that more closely simulates the final product. While working with us, customers gain access to our experienced engineering, drafting, and machining professionals for additional design support.

Precision Machining

Rapid Seal employs a diverse range of cutting-edge machining equipment. We can machine standard and custom profiles with an ID as small as ¼" (6 mm) to an OD as large as 29" (737 mm).

We can maintain tight precision on elastomeric and thermoplastic machined components. Our machined elastomers are available in 70 to 95 Shore A durometer. Our tolerance capabilities vary depending on the parts' dimensions.

Rapid Seal

Profiles

Customers have access to over 150 pre-programmed Rapid Seal profiles. Our technical professionals can work with customers to modify standard profile designs to optimize seal performance. Possible design modifications include lip design, seal clearances, and various other key dimensions.

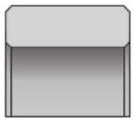
The material legends on the following pages represent the standard material used for a specific profile. For more information and a complete listing of available materials, reach out to us today.


Rod Seals


PistonSeals


Rotary Shaft Seals


Wipers


Wear Rings


Back-Up Rings


Gaskets

Materials

We stock an extensive range of elastomeric compounds and plastic materials. This allows us to provide superior machined solutions that optimize our customers' applications. Our materials are available in a range of tube and billet sizes, enabling us to reduce material waste and save our customers' money. Our machined elastomers are available in 70 to 95 durometers on the Shore A scale.

Plastics

- KasPex™ PEEK
  - Virgin
  - Carbon reinforced
  - Glass reinforced
- Nylon
- Acetal
- UHMW-PE
- Ekonol®
- Torlon®/Polyamide-imide
- Vespel®
- Ertalyte®/PET-P
- Polyphenylene Sulphide (PPS)
- PTFE
  - Virgin
  - Bronze reinforced
  - Carbon reinforced
  - Carbon/Graphite reinforced
  - Glass reinforced
  - Moly/Glass reinforced

Elastomers

- Nitrile
- Hydrogenated Nitrile
- BoKure™ Urethane
- BoKure™ GHOST
- Viton™/Fluorocarbon
- Ethylene Propylene (EPDM)
- Aflas® FEPM
- Neoprene/Chloroprene
- Hytrel®

Rapid Gasket

Rapid Gasket is our in-house gasket manufacturing service, which enables us to create both standard and custom gaskets.

Our extensive inventory of rubber, plastic, and composite sheet materials allows for the quick turnaround of cut gaskets. To meet a range of application and industry requirements, our sheet is available in commercial, industrial, and premium grades. Select materials are FDA-compliant, and NSF and MIL-SPEC certified.

Need guidance selecting the right material? Our knowledgeable team of professionals can assist in determining the material solution to optimize gasket and application performance.

Composite Non-Asbestos

AraLite™ Compressed Sheet
BA-50
BA-CF

Thickness: 1/64", 1/32", 1/16", 1/8"
Sheet Size: 5' × 5', 5' × 10', 5' × 15'

Composite Flexible Graphite

Grafilit® SF
Grafilit® SL
Grafilit® SP

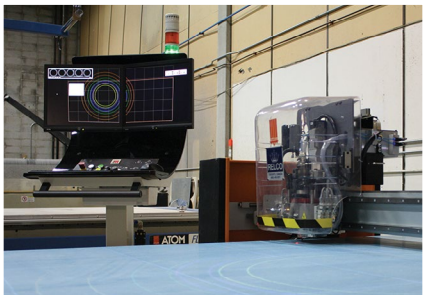
Thickness: 1/64", 1/32", 1/16", 1/8"
Sheet Size: 3' × 3'

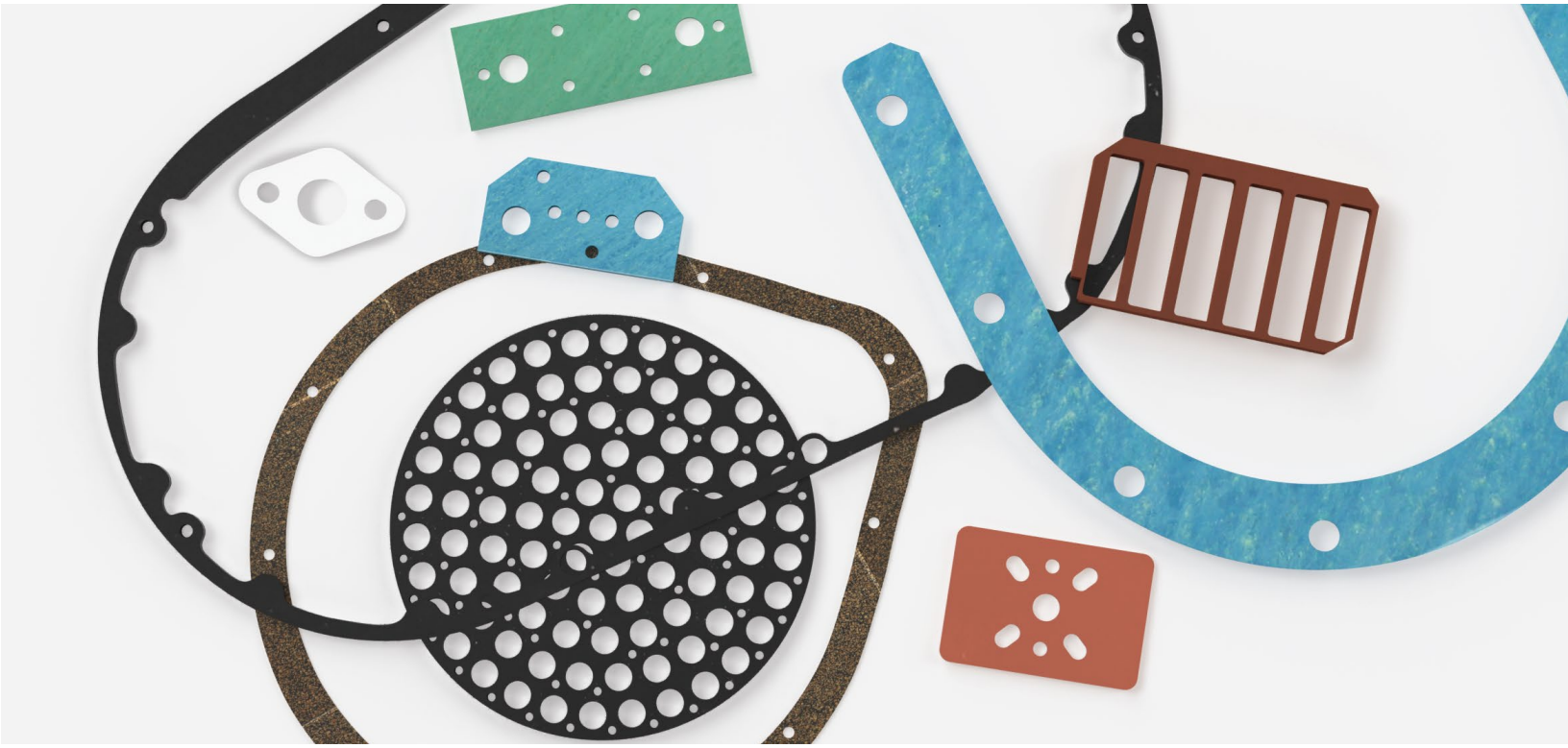
Rubber and Plastic

RyFlor™ ePTFE
Nitrile
Hydrogenated Nitrile
White Nitrile
Nitrile Sponge
Cork/Nitrile
Viton™/Fluorocarbon
PTFE
Ethylene Propylene (EPDM)

Thickness: 1/64", 1/32", 1/16", 1/8", 3/16", 1/4"
Sheet Size: 4' × 25', 4' × 50', 4' × 100'

Neoprene/Chloroprene
Silicone
Silicone Sponge w/PSA Backing
UHMW-PE
Neo-Nylon
Red Rubber
Vegetable Fibre/Plant Fibre
Natural Rubber





Custom-Cut Gaskets

We can manufacture custom-cut gaskets to meet our customers' unique shape and size requirements. When a sample is provided, our team can reverse engineer the gasket dimensions using our LaserQC®. Subsequently, our drafting team will fine-tune the dimensions to optimize tolerance levels.

If required, our technical staff can provide guidance in choosing the ideal material for an application. We offer the flexibility to produce low or high quantities as needed.

We go the extra mile to ensure convenience for our customers by keeping gasket drawings and material on file, facilitating easy re-ordering. Our commitment to quality ensures consistent and high-quality cut gaskets every time.

Upon request, custom gaskets can be manufactured in as little as 24 hours. *Rush charges may apply*.

To provide us with dimensions, customers can locate and download our Custom Gasket Measurement forms on our website, *hitechseals.com*.

Available forms include:

- Round Gasket Measurement Form
- D-Style / Half Circle Gasket Measurement Form
- Firetube / Obround Gasket Measurement Form
- Square / Rectangle Gasket Measurement Form
- Elongated D-style Gasket Measurement Form

For more information on our custom cut gaskets or to request a quote, we invite you to reach out to us via phone or email at *info@hitechseals.com.*

BoKure™ Urethane

We manufacture cast urethane products for applications across countless industries. Our knowledgeable team of urethane professionals can assist with the design, development, and manufacturing of simple or complex components. We use BoKure Urethane: a pure, high performance material engineered to provide exceptional durability, resilience, and long-term performance in urethane components.

Our BoKure™ urethane compounds offer excellent characteristics that help save customers money by increasing product longevity, equipment run time, and reducing costly maintenance. These compounds are commonly used as alternative replacements for rubber, plastic, or metal components. They are beneficial when impact, corrosion, or wear is a concern. We are capable of manufacturing standard or custom components such as rollers, spacers, protector products, and bushing impact pads. If required, we can reverse engineer components with low tooling costs.

Customizing Your Urethane Solution

BoKure™ urethane compounds are made using high-performance resins, curatives, and additives, with each possessing its own set of unique capabilities and advantages. We can assist with selecting the ideal compound for your application and environmental demands. When creating a urethane product, there are two main types of urethanes: polyether and polyester.

Polyester advantages:

- Oil and fuel resistance
- High-shock absorption
- Great dynamic properties
- Increased resistance to heat aging

Polyether advantages:

- More flexibility over polyesters
- Remarkable hydrolysis resistance
- Good moisture resistance
- Excellent low-temperature performance

Durometers

Cast urethane components can span a broad range of hardness, from as soft as an eraser to as hard as a bowling ball. Hi-Tech Seals can maintain urethane's toughness and resilience while manufacturing components for Shore A and Shore D durometers. Our in-house capabilities allow us to manufacture dual-durometer urethane components

Shore A	30	35	40	45	50	55	60	65	70	75	80	85	90	95			
Shore D														65	70	75	87

Cast Urethane

Hi-Tech Seals can incorporate metal hardware into your urethane components. This ability allows us to provides three key opportunities:

Metal Threads

Metal threads can be incorporated into your urethane component. Metal threads will allow the urethane component to be screwed into place.

Square Cut Ring

Create split parts by incorporating metal studs into your urethane component. Hi-Tech Seals can manufacture components in two pieces. On one of the components we can mould in a stud that will insert through the other component. Split parts allow for easy installation without the trouble of disassembling the machinery.

Quad Ring

Incorporate a rigid metal support structure within the urethane. The metal hardware allows the urethane to benefit from the strength of the metal while exhibiting the properties of a urethane.

Over Moulding

Hi-Tech Seals offers an over moulding service as a means to recycle worn parts. Over moulding is cost effective and environmentally friendly. The over moulding process prolongs the life of existing rubber and plastic components by replacing the worn off area of the part with a urethane blend. Due to BoKure™ urethane's improved wear and load bearing ability, over moulded components can even outperform many OEM components.

If a sample component is available, Hi-Tech Seals will use the sample to create the cast. If a sample component is unavailable, a cast can be formed from a part created on our 3D printer or manufactured from our CNC machine. Once the cast is created, the worn component is placed into the proper position, and the urethane blend fills the empty space in the cast.

Custom Colours and Identification Marks

We can manufacture urethane components in custom colours and include logos, part numbers, and dimensions for enhanced brand recognition and easy traceability of proprietary parts.

Additional Custom Manufacturing

Custom Moulded Products

We have over 35 years of experience working with customers from the design phase to the production of high-performance moulded components. Our extensive capabilities allow us to produce high-performance parts tailored to unique customer needs. We can bond our rubber materials to metal and PTFE.

Rubber to Metal Bonded Parts

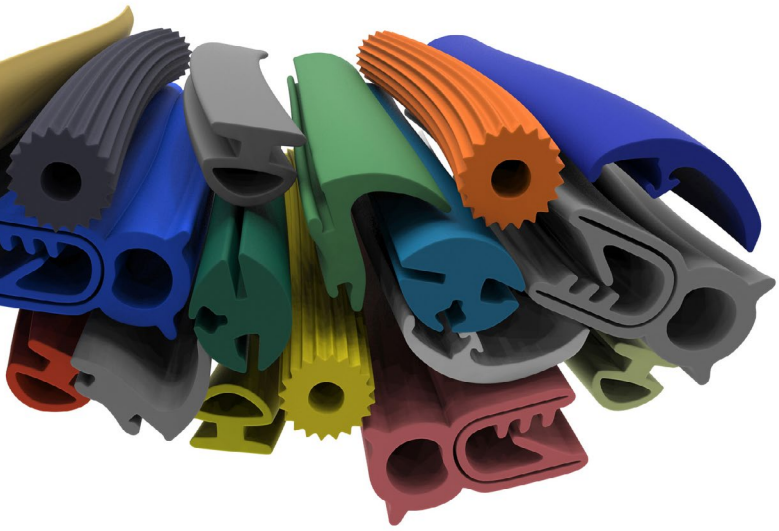
We offer elastomer to metal bonded solutions that meet and exceed our customer's requirements. Our knowledgeable professionals assist with the design and material selection of components. Our end goal is to provide a solution that extends equipment run time and reduces maintenance costs.

Rubber to PTFE Bonded Products

PTFE is known for being non-stick material, with excellent chemical resistance and low friction capabilities. This makes it difficult to bond it to other elastomers and materials. We have implemented a tried-and-true method that creates a long-lasting bond between the materials.

Other capabilities we offer include reinforcing rubber materials with fabric and incorporating metal inserts into components. Common rubber moulding materials include:

- Nitrile
- Hydrogenated Nitrile
- Viton™/Fluorocarbon
- Ethylene Propylene (EPDM)
- Aflas® FEPM
- Silicone
- Perfluoroelastomer
- Fluorosilicone



Rubber Extrusions

Rubber extrusions are soft-sealing continuous profiles designed to fill voids or isolate fluids in various applications. These versatile components find widespread use as seals, gaskets, weatherstrips, connectors, trims, bushings, tubes, hoses, pipes, and bumpers. The profiles can range from simple to intricate designs and from solid to hollow.

We assist customers in choosing the optimal extruded profile configuration and material for both standard and custom solutions. Our materials include but are not limited to:

- Nitrile
- Viton™/Fluorocarbon
- Neoprene/Chloroprene
- Ethylene Propylene (EPDM)
- Silicone
- Natural Rubber
- Vinyl

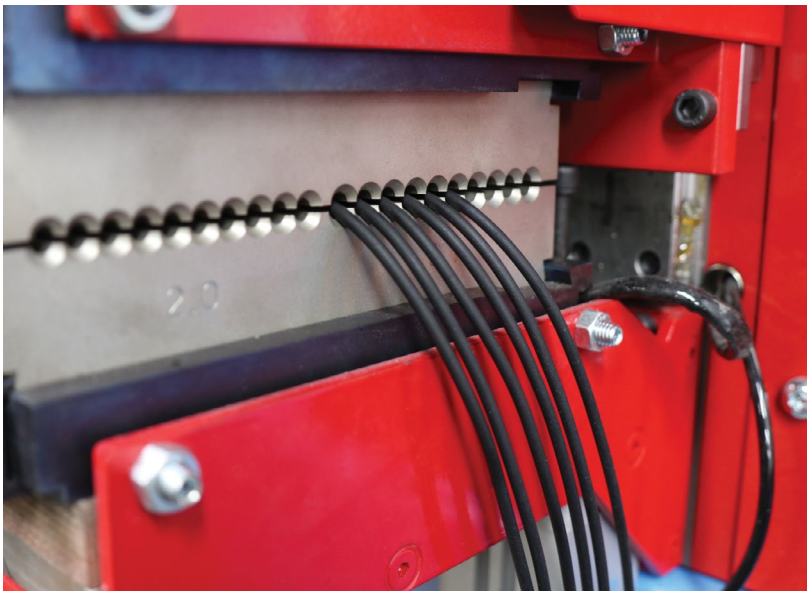
Spliced & Vulcanized O-Rings

We offer spliced and vulcanized O-rings in standard and square profiles, multiple cross sections, and in various materials. Quad ring cord is available upon request.

Spliced and vulcanized O-rings are made by cutting extruded cord stock into lengths and then joining them together. The ends are spliced together by applying a heat-activated bonding agent and placing them in a die for a specific length of time. This process forms a molecular connection to achieve a strong bond.

These O-rings are an excellent choice for static sealing applications when:

- A moulded O-ring can't be used due to size requirement or non-standard dimensions
- A small quantity of O-rings is needed
- The lead time for moulded O-rings is too long



O-Ring Cord Cross Sections

Imperial (inches)									
0.063	0.094	0.103	0.125	0.139	0.188	0.210	0.250	0.275	0.312
0.375	0.437	0.500	0.562	0.625					

Metric (mm)									
1.60	2.00	2.40	2.50	3.00	3.50	4.00	4.50	5.00	5.70
6.00	6.50	7.00	8.00	9.00	10.00	11.00	12.00		

Additional sizes are available upon request.

Square Cord Cross Sections

Imperial (inches) Square Cord								
0.103	0.125	0.139	0.210	0.250	0.275	0.312	0.375	0.500

Additional sizes are available upon request.

Our cord stock is available in cut lengths, splicing kits, and through our in-house splice and vulcanizing service. Materials include, but are not limited to:

- Nitrile
- Hydrogenated Nitrile
- Viton™/Fluorocarbon
- Aflas® FEPM
- Ethylene Propylene (EPDM)
- Neoprene/Chloroprene
- Silicone

Beyond O-Rings

Our splice and vulcanizing expertise extends beyond O-rings to gaskets and other sealing products. All vulcanized products benefit from the same precision that we apply to our vulcanized O-rings. This ensures a high-quality, superior bond suited for diverse applications. Our range of advanced vulcanizing capabilities includes, but is not limited to:

- Extruded Profiles
- Gaskets
- Split Rotary Seals
- Rubber-to-metal Bonding
- Encapsulated O-rings
- Industrial Tubing
- Continuous Molded Products
- Other bonding services

Kit Creation Program

Our Kit Creation Program enables customers to stay organized, increase efficiency, and simplify the ordering of seals and related products, whether for maintenance or manufacturing needs.

Our knowledgeable seal professionals can assist in identifying and measuring kit components. Once identified, these components are grouped under a single part number for easy ordering and reordering. Kits can include various products such as seals, gaskets, rubber, plastic, metal components, accessories, and much more.

Kit creation program advantages:

- Increased inventory control
- Streamlined processes
- Consolidation of inventory
- Enhanced picking and assembly efficiencies
- Increased brand recognition

Kitting Service Levels

We understand that our customers' kitting requirements range in complexity from basic to highly intricate. We offer three service levels that meet these varying demands. Our team of sealing professionals works closely with our customers to determine which service level best suits their needs. Customers can include additional instructions in their kits as required.

Kitting Service Level Elements

- All kit components in a master bag
- Sub-bagging of kit components
- Customer logoed master label
- Standard sub-labels
- Custom sub-labels
- Package in red bags (zip lock)
- Add instructions

Supplementary Kitting Instruction Examples:

- Heat seal all bags
- Package all components in zip-lock bags
- Remove O-Ring from part
- Add country of origin to all labels
- Certificate of Conformance is required
- Bubble wrap parts

Seal Analysis Lab

Seal Analysis Lab
ENGINEERING & QUALITY INSPECTION

Our Seal Analysis Lab plays an important role in the engineering services we offer. It is a step forward in the continual advancement of our quality control program and unique services. The lab contains a variety of state-of-the-art equipment that allows our engineers, drafting technicians, and quality control staff to perform various seal-related testing.

Detailed Inspection Report

Our lab employs two optical comparator machines, a Micro-Vu Matrix and Micro-Vu Excel. This inspection equipment allows us to quickly and reliably measure components to a high level of accuracy. The Matrix is a manually operated system used to inspect smaller quantities or more intricate parts. The Excel is an automated system, capable of consecutively measuring multiple components and inspect parts approximately two times larger than what the Matrix can measure.

Our staff uses both devices to perform detailed inspections of products to determine if they meet the provided specifications. This information is often turned into a report for our customers use.

Failure Analysis Report

Our failure analysis report (FAR) examines and analyzes seals or gaskets and the environment in which they failed. This allows us to determine the most likely cause(s) of the failure. Once the cause(s) has been determined, suitable recommendations that will optimize future performance are presented.

We perform the analysis with a failed part sample and application information. If a sample cannot be provided, a picture and a detailed description of the part, application, and environment is needed.

Positive Material Identification

We perform positive material identification (PMI) on elastomeric, plastic, and metal materials. To identify elastomer and plastic materials, we utilize a mid-infrared FT-IR spectrometer. The FT-IR spectrometer analyzes the molecular structure of a material to determine the base polymer type. For the identification of metal components, we utilize our XRF gun, which allows for non-destructive testing. Contact us for sample size requirements or other PMI information.

Additional Testing and Analysis

Our Seal Analysis Lab can perform a variety of additional tests and general analyses using our state-of-the-art equipment, including:

- Tensile Strength
- Tensile Modulus
- Specific Gravity
- Face Flatness
- Elongation
- Heat Ageing Testing
- Hardness Testing
- Compression Set

Additional Services

Custom Labels

The bags and labels that products come in typically have important information on them. At Hi-Tech Seals, we can customize labels to include a company name, logo, part number, material, and other relevant information. This can save customers time and money from re-labelling products once received.

Custom labels can help staff and customers reduce installation and inventory errors with key information at their fingertips. They are also beneficial when the product needs to be reordered.

Custom label advantages:

- Increase brand exposure
- Company-specific part numbers
- Easier reordering process
- Labels can be specific to the application

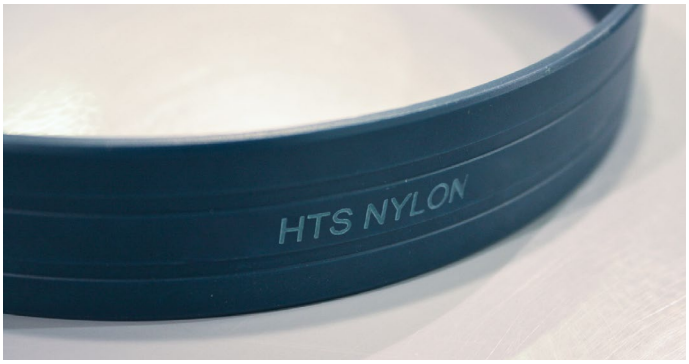
Laser Engraving

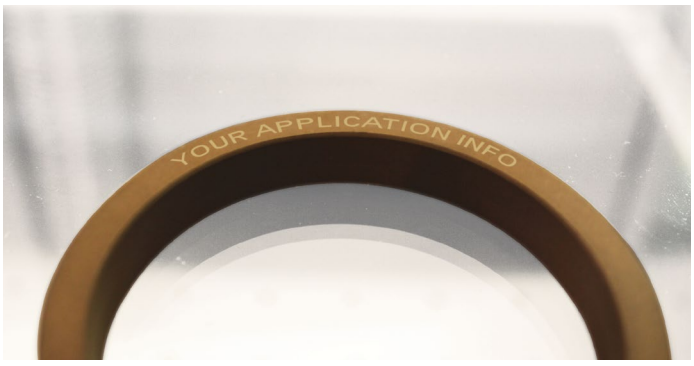
More and more companies are looking to have specific information or identifying marks on their parts. These marks help with product identification, traceability, branding, and simplifies the re-ordering process.

Our laser engraving machine allows customers to engrave their company name, part number, application information, logo, and other important identifiers onto parts. We can engrave most plastic, rubber, and metal materials. The focused laser beam etches damage-free and easy-to-read marks along a surface as small as 1/8" tall.

Laser engraving advantages:

- Improve the reordering process for staff and customers
- Assists with product traceability
- Capable of engraving on flat and round surfaces without distorting the text or image
- Increases brand exposure
- Locks in proprietary part ordering





Canadian Branches

Canadian Headquarters | 9211 - 41 Ave NW | Edmonton, AB | T6E 6R5 | Ph: 780.438.6055 | Fax: 780.434.5866

Calgary | 6323 - 35 St. SE | Calgary, AB | T2C 1N1 | Ph: 403.720.2856 | Fax: 403.279.2662

Winnipeg | 445 Egesz St. | Winnipeg, MB | R2R 2V5 | Ph: 204.775.7881 | Fax: 204.775.7954

Newmarket | 1180 Kerrisdale Blvd; Unit #8 | Newmarket, ON | L3Y 8Z9 | Ph: 905.953.9666 | Fax: 905.953.8739

Ste-Julie | 2101 Rue Léonard-De Vinci | Ste-Julie, QC | J3E 1Z2 | Ph: 450.655.7325 | Fax: 450.655.7359

US Branches

Conroe | 12064 FM 3083 | Conroe, TX | 77301 | Ph: 936.206.3124 | Fax: 936.756.0538

Broussard | 909 Garber Rd. | Broussard, LA | 70518 | Ph: 337.347.8870 | Fax: 337.347.8871

Frederick | 3762 Puritan Way, Unit 1 | Frederick, CO | 80516 | Ph: 303.957.2790

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BoKure™ Urethane

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