Hi-Tech Seals



Oilfield Product Guide

Drilling Tools • Measurement While Drilling (MWD) • Wellhead • Completions
Wireline Control Valves (BOP) • Valves • Hydraulics • Compressors • Pumps







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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Expertise and Advantages



For more than thirty years, Hi-Tech Seals has been **a leader in the oil and gas industry,** providing advanced sealing solutions and components to address its ever-evolving demands.

By working closely with you, we deliver solutions tailored to your specific application requirements that not only enhance tool and equipment integrity but also **aid to the efficiency and safety of your operations.**

Expertise and Advantages

34+
Years in the industry

500+
Product Lines

30,000+
Active Part Numbers

Solutions for Every Phase

Whether used for upstream, midstream, and downstream, or for service and workovers our extensive range of offerings, including seals, gaskets, ceramics, metal components that include carbides, and custom solutions, are engineered to meet or exceed the rigorous standards of quality and performance required for every application.



Excellent Lead Times

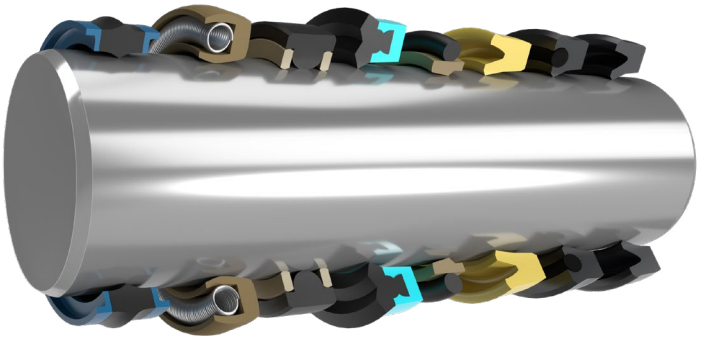
Streamlined processes, efficient logistics, strong supply chain partnerships, and inventory management expertise collectively contribute to our excellent lead times. We maintain an extensive stock of products and materials to ensure a rapid turnaround of your orders, keeping your projects on schedule.



Expertise and Advantages

Designed for Extreme Conditions

We offer a multitude of elastomer and plastic compounds for oil and gas environments, formulated and designed to provide optimal results. These compounds can withstand high temperatures, increased pressures, abrasive environments, aggressive chemicals, steam exposure, sour service conditions, and rapid gas decompression.



Seal Analysis Lab

ENGINEERING & QUALITY INSPECTION

Excellence in Engineering and Quality

Our reputation for providing innovative and reliable sealing solutions is built on our in-depth knowledge and experience of oil and gas markets and applications. We employ state-of-the-art technology for rigorous testing procedures on various sealing materials, showcasing our unwavering commitment to quality. We are constantly innovating and developing new compounds to stay at the forefront of industry demands. Committed to our Quality Management System (QMS), we take pride in our continuous adherence to the ISO 9001 standard.

ISO 9001
REGISTERED QMS



Expertise and Advantages



Global Presence

With branches strategically positioned across Canada and the US, our North American presence is further amplified through our partnership with Carco Group, which gives us access to a network of partners and markets worldwide. This not only boosts our distribution capabilities but also enriches our product portfolio, ensuring we are well positioned to provide the technical support and diverse solutions you need, wherever you are.

Compliance and Certification

Hi-Tech Seals provides high-quality materials that comply with the rigorous criteria established by several of the most respected regulatory bodies in the field. This includes compliance with standards from ISO, TOTAL, NACE, API, NORSOK, as well as customer-specific requirements and standards.

Markets Served

In the dynamic and **challenging world of oil and gas** exploration and extraction, the integrity and performance of downhole tools, valves, completion systems, compressors, blowout preventers, wellheads, pumps, Measurement While Drilling (MWD) technologies, and hydraulics are paramount. The tools and equipment used in various stages of oil and gas are subjected to extreme temperatures, pressures, and abrasive and corrosive conditions, including the risks of rapid gas decompression (RGD) and sour gas exposure.

Hi-Tech Seals specializes in providing **high-performance seals and components** that address the industry's most demanding conditions. Our high-performance products include materials that comply with rigorous standards and are proven for operational efficiency, safety, and equipment longevity.



Drilling Tools

Downhole tools, including rotary steerable systems, mud motors, shock tools, agitators, and fishing tools, operate under challenging subterranean environments. They are exposed to high pressures, abrasive environments, varying viscosities, and exposure to corrosive fluids, all of which can cause seals to fail prematurely. We provide high-performance seals designed to extend service life across various drilling conditions. This reliability is essential for maintaining operational efficiency and safety during downhole activities, thus promoting uninterrupted drilling operations.



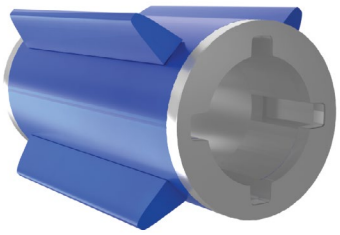


- O-Rings
- Loaded U-Cups
- Back-Up Rings
- Mud Motor Boots
- T-Seals
- Retaining Rings
- Grooved Wear Rings
- Wear Rings
- Wipers
- Kalsi Seals
- Bonded Washers
- Belleville Disc Springs
- Bearings
- Dry Slide Bearings
- Tungsten Carbide Sleeves
- Drill Bit Inserts
- Rock Bit Balls
- Carbide Components
- Custom Cut Gaskets
- Balls
- Pipe Plugs
- Tool Joint Protectors
- Screws and Filters
- Hex Key & Pins
- Seal Kits



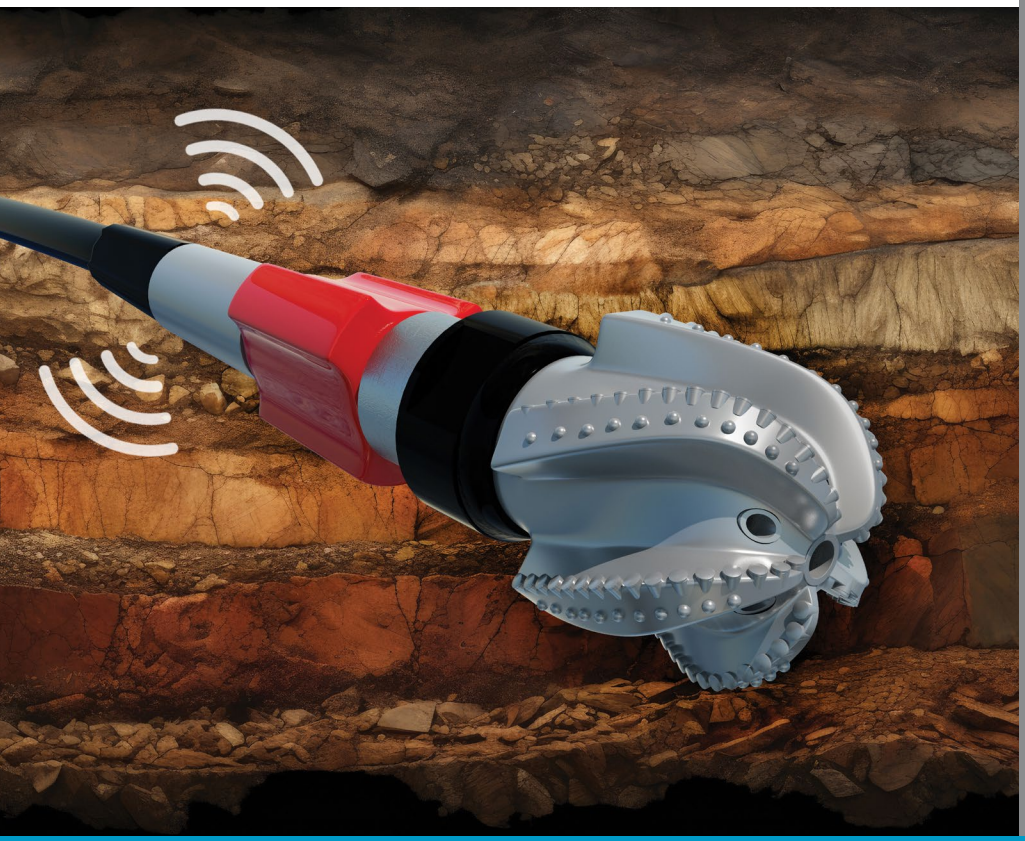
Measurement While Drilling (MWD)

Measurement While Drilling (MWD) provides real-time data on the wellbore's direction and formation properties to enable precise drilling and optimal placement of wells. However, MWD equipment must contend with severe vibration, shock, and abrasion inherent in drilling operations, not to mention the extreme temperatures and pressures encountered downhole. This harsh environment can compromise seal integrity. We offer seals suitable for aggressive fluids, fluctuating temperatures, abrasive conditions, and wellbore pressures, preventing potential MWD system failures.







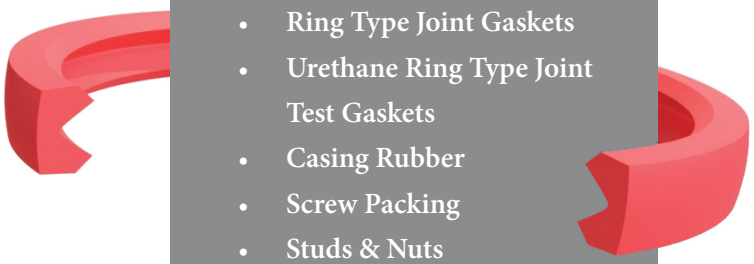


- O-Rings
- Loaded U-Cups
- Back-Up Rings
- Wear Rings
- Retaining Rings
- T-Seals
- Spring Energized Seals
- Washers
- Belleville Disc Springs
- Rubber-to-Metal Bonded Parts
- Centralizer Fins
- Carbide Components
- Inner Sleeves
- Orifices
- Poppet Bolts
- Metal Components
- Ceramic Parts
- Specialty Rubber Components
- Sleeve Mesh
- Kapton/Polyimide Tape
- Seal Kits

Wellhead

Wellheads are essential for the safe, controlled, and efficient extraction of oil and gas from underground reservoirs, operating under high pressures and temperatures. The effectiveness of a wellhead in these demanding conditions heavily depends on the integrity of its sealing system. We provide high-performance seals engineered for these harsh conditions, enhancing wellhead's ability to securely contain and manage well fluids.





- O-Rings
- Loaded U-Cups
- Back-Up Rings
- Retaining Rings
- Oil Filter Seals
- Secondary Seals
- S-Seals
- FS Seals
- Oil Seals
- Vee Packing
- Braided Packing
- Ring Type Joint Gaskets
- Urethane Ring Type Joint Test Gaskets
- Casing Rubber
- Screw Packing
- Studs & Nuts
- Spliced & Vulcanized O-Rings
- Seal Kits



Completions

Completion seals are exposed to severe conditions, deeper wells, and a wider range of geographical environments. They are used in tools and equipment such as packers, hangers, and bridge plugs. These seals encounter extreme temperatures, high pressures, steam, rapid gas decompression, and aggressive fluids, threatening equipment integrity and performance. To address these issues, we provide advanced sealing solutions engineered for superior resilience and enhanced performance in the industry's most demanding conditions.



- O-Rings
- Loaded U-Cups
- Wipers
- T-Seals
- PTFE & PEEK Back-Up Rings
- Retaining Rings
- Wear Rings
- DZ Seals
- S-Seals
- Bonded Seals
- Degradable Seals
- Hammer Union Seals
- Hammer Union Protectors
- High-Temperature Seals 343°C/650°F
- Custom Vee Packing Sets
- Packer Elements
- Balls
- Sleeve Mesh
- Seal Kits







Wireline Control Valves (BOP)

Blowouts are major risks in oil and gas operations across land wells, offshore rigs, and subsea wells. Wireline control valves, or Blowout Preventers (BOP), are key to safety by controlling wellbore pressure under extreme conditions. This includes operating under high pressures, temperatures, and corrosive fluids. These harsh conditions can damage seals, leading to potential hazards for both personnel and the environment. Hi-Tech Seals offers a range of sealing products to meet these demanding conditions, promoting equipment's optimal performance and operational safety.









- O-Rings
- Loaded U-Cups
- T-Seals
- Back-Up Rings
- High-Temperature Seals 343°C/650°F
- Inner BOP Seals
- Outer BOP Seals
- Large Bore Piston Seals
- Otis & Baker Vee Packing
- Vee Packing
- Blue Bullet Wireline Packing
- Urethane Ring Type Joint Test Gaskets
- Gaskets
- Coil Tubing Stripper Elements
- Packoff Oil Savers
- A3 Elements
- G-Style Packoff Elements
- Door Seals
- EUE Protectors
- Caps & Plugs
- Thread Protectors
- Seal Kits

Valves

Valves regulate fluid flow and pressure during extraction and processing. Seals in valves, including those in gate, globe, and ball valves are crucial for preventing leaks, even under conditions of high pressure, high temperature, cryogenic conditions, and sour gas exposure. These seals must also endure the risk of rapid gas decompression. Our portfolio includes seals and materials that resist a broad spectrum of chemicals, provide outstanding wear resistance, and can withstand environments with pressure cycling and extreme temperatures.









- O-Rings
- Loaded U-Cups
- Back-Up Rings
- Retaining Rings
- Crown Seals
- Oil Seals
- Spring Energized Seals
- Gate Valve Seals
- Grafoil Rings
- U-Packings
- Seat Seals
- Valve Seats
- Oil Housing Seals
- High-Temperature Seals 343°C/650°F
- Belleville Disc Springs
- Braided Packing
- Vee Packing
- Stem Packing
- Ball Bearings
- Urethane Ring Type Joint Test Gaskets
- Spiral Wound Gaskets
- Custom Cut Gaskets
- Pipe Flange Gaskets
- Dry Slide Bearings
- Balls
- Caps & Plugs
- Studs & Nuts
- Flange Protectors
- Stud Hole Flange Protectors
- Seal Kits

Hydraulics



Hydraulic seals frequently encounter challenges such as high-pressure environments, extreme temperatures, and exposure to various fluids, all of which can lead to equipment failure. Hi-Tech Seals' hydraulic sealing solutions are designed to endure these harsh conditions, aiding in a leak-free system and an extended equipment lifespan. Our seals are engineered to offer enhanced capabilities, including the ability to withstand higher pressures, exceptional wear resistance, and superior chemical compatibility with hydraulic fluids.



- O-Rings
- Loaded U-Cups
- T-Seals
- Back-Up Rings
- Retaining Rings
- Wear Rings
- Oil Seals
- Piston Rings
- Buffer Seals
- Fluid Seals
- Mechanical Seals
- Head Seals
- Wipers
- Vee Packing
- Dry Slide Bearings
- Caps & Plugs
- Seal Kits

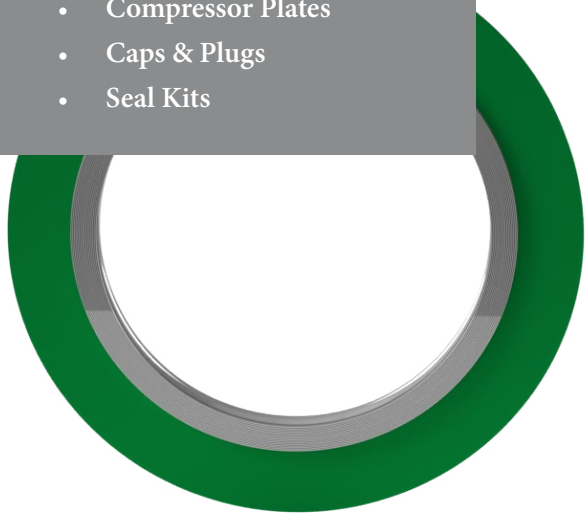


Compressors

Operating in the oil and gas industry, whether in upstream or midstream sectors, refineries, petrochemical and chemical plants, power generation, or water treatment facilities, presents unique challenges. A major challenge in these environments is the operation of compressors, which are subject to harsh, explosive, and corrosive conditions. Such demanding environments require reliable sealing solutions. Hi-Tech Seals provides seals developed to endure wear, resist chemical attacks, and withstand extreme temperatures and pressures.

- Mechanical Seals
- Square Cut Rings
- Oil Filter Seals
- Wear Rings
- High-Temperature Seals 343°C/650°F
- Piston Rings
- V-Seals
- Bonded Washers
- Vee Packing
- Extension Rubbers
- Liner & Door O-Rings
- Braided Packing
- Valve Cover Gaskets
- Spiral Wound Gaskets
- Custom Cut Gaskets
- Crankcase Breathers
- Compressor Plates
- Caps & Plugs
- Seal Kits









Pumps

Pumps such as mud motors, centrifugal, reciprocating, rotary, progressive cavity, and diaphragm, among others, require dependable sealing. These pumps present specific design challenges and stringent conditions for establishing a reliable seal. Seals are vital for ensuring the longevity and integrity of a pump's components and play an important role in the generation of pressure and protection against environmental contamination. Hi-Tech Seals offers a wide range of sealing solutions to prevent leaks, contain fluids, maintain pressure, and block contaminants effectively.







- O-Rings
- Loaded U-Cups
- Back-Up Rings
- Mechanical Seals
- Grafoil Rings
- Wipers
- Spring Energized Seals
- Oil Seals
- Kalrez
- DZ Seals
- V-Seals
- Bonded Washers
- Piston Rings
- Lantern Rings
- Modular Bearings
- Vee Packing
- High Performance Packing
- Pressure Pump Packing
- Diaphragms
- Custom Cut Gaskets
- Spiral Wound Gaskets
- Urethane Ring Type Joint Test Gaskets
- Pipe Flange Gaskets
- Injectable Packing
- Ball Bearings
- Balls
- EUE Protectors
- Spliced and Vulcanized O-Rings
- Braided Packing Kits
- Chemical Injection Pump Kits
- Seal Kits

Oil & Gas Industry Material Testing Standards

The ever-evolving demands in oil & gas industry applications require enhanced sealing performance. To ensure sealing materials can withstand the critical environments they operate in, testing standards have been established. These tests focus on certifying elastomers that encounter application environments such as rapid gas decompression (RGD) and sour gas service (H_2S). Common test standards include API 6A, NORSOK, NACE, TOTAL, and ISO. The table below features Hi-Tech Seals' compounds that were developed to meet these strict requirements.



Material	HTS CMPD #	Duro. Shore A	Temp. Range	API 6A Sour Gas	NACE TM0187 Sour Gas	NORSOK M710 Sour Gas	NORSOK M710 RGD Rev. 2	NORSOK M710 RGD Rev. 3 (ISO 23936-2)	NACE TM0297 RGD	TOTAL GS EP PVV 142 RGD
Fluorocarbon (Low Temp. FKM)	V9M2	90	-40°C to 200°C -40°F to 392°F	✓			✓		✓	✓
Fluorocarbon (Low Temp. FKM)	V9M3	90	-47°C to 200°C -53°F to 392°F					✓		
Fluorocarbon (FKM)	V9MY	90	-25°C to 200°C -13°F to 392°F		✓			✓		
Hydrogenated Nitrile (HNBR)	H716	75	-40°C to 150°C -40°F to 302°F	✓						
Hydrogenated Nitrile (HNBR)	H717	75	-50°C to 150°C -58°F to 302°F	✓						
Hydrogenated Nitrile (HNBR)	H822	80	-50°C to 150°C -58°F to 302°F		✓					
Hydrogenated Nitrile (HNBR)	H925	90	-55°C to 150°C -67°F to 302°F	✓				✓		
Hydrogenated Nitrile (HNBR)	H966	90	-40°C to 150°C -40°F to 302°F	✓			✓			✓
Hydrogenated Nitrile (HNBR)	MH91	95	-20°C to 150°C -4°F to 302°F	✓						
Hydrogenated Nitrile (HNBR)	MH92	88	-30°C to 150°C -22°F to 302°F	✓				✓		
Hydrogenated Nitrile (HNBR)	H813	85-90	-40°C to 150°C -40°F to 302°F	✓				✓		
Perfluoroelastomer (FFKM)	PF91	90	-10°C to 290°C 14°F to 554°F		✓		✓		✓	
Aflas® FEPM	A9M2	90	0°C to 250°C 32°F to 482°F			✓	✓	✓	✓	✓
Aflas® FEPM	A912	90	-5°C to 225°C 23°F to 437°F				✓			

WolCar™ Carbide

WolCar™ carbide is Hi-Tech Seals' family of superior performing cemented tungsten carbide materials. Tungsten carbide compounds offer extreme toughness, hardness, and remarkable wear resistance. Finished WolCar™ carbide materials can be produced into virtually any shape and sizes, allowing us to provide customers with precision components for a wide range of industrial and commercial applications.

Our family of tungsten carbide, also known as cemented carbide, utilizes cobalt and nickel binder agents. Nickel bonded WolCar™ carbides offer high corrosion and wear resistance, without compromising strength, making them ideal for harsh application conditions. Cobalt bonded WolCar™ carbides possess increased impact resistance abilities over their nickel counterparts. Cobalt is the most widely used binder, since it helps achieve high strength and toughness. Cobalt bonded compounds maintain excellent strength at high temperatures and are highly abrasion resistant. Other binder agents available upon request.

WolCar™ can be used to create drill bit inserts, wear parts, precision components, inner sleeves, poppet inserts, bushings, and more.

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™ ceramics are used to manufacture a wide range of components including wear sleeves, balls, burst discs, inserts, seats, bearings, and more.

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



KasPeX™ PEEK

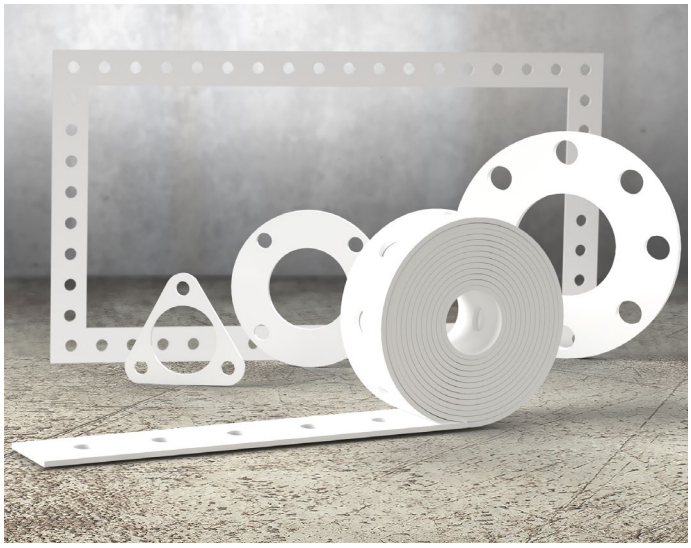
KasPex™ PEEK is Hi-Tech Seals' family of high-performance thermoplastic PEEK. These compounds provide durability in harsh chemical environments, excellent mechanical strength, and remarkable dimensional stability. They improve the performance and reliability of machined parts in countless applications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

RyFlor™

RyFlor™ RF40 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-service 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 ensures leak-free performance and prevents costly fluid and gas losses. The exceptional sealing capability makes it suitable for various industrial settings, such as pipelines, flanges, pumps, and compressors. AraLite™'s high compressibility allows it to conform tightly to irregular surfaces, accommodating various machinery and equipment.

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

BoKure™ GHOST

Bokure™ GHOST is our degradable urethane compound, formulated to thrive in harsh, corrosive (aqueous, brine conditions) downhole oil and gas environments. As BoKure™ GHOST degrades, it breaks into small particles that wash away easily without creating any obstructions. This can minimize costly and time-consuming well intervention by reducing the need for auxiliary equipment to complete the well.

BoKure™ GHOST advantages:

- Breaks down in fresh water or brine solutions
- Non-binding and non-clogging particles
- Reliable compound degradation allows for less or no additional well intervention
- Increase efficiencies by simplifying the well completion process





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).

Super Hi-Glyde™ advantages:

- Extends the equipment service life
- Enhances O-rings and seal life and performance
- Protects O-rings and seals from damage
- Offers an excellent temperature range
- Compatible with a wide range of materials
- Improves ease of installation
- Safe to use
- FDA compliant

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.

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 also 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

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.



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.

Capabilities

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.

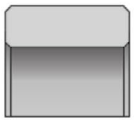
The material legends on the following pages represent the standard material used for a specific profile. For more information and a complete listing of available materials, reach out to us today.


Rod Seals


PistonSeals


Lip Seals


Wipers


Guide 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-U
BA-50
BA-CF

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

Composite Flexible Graphite

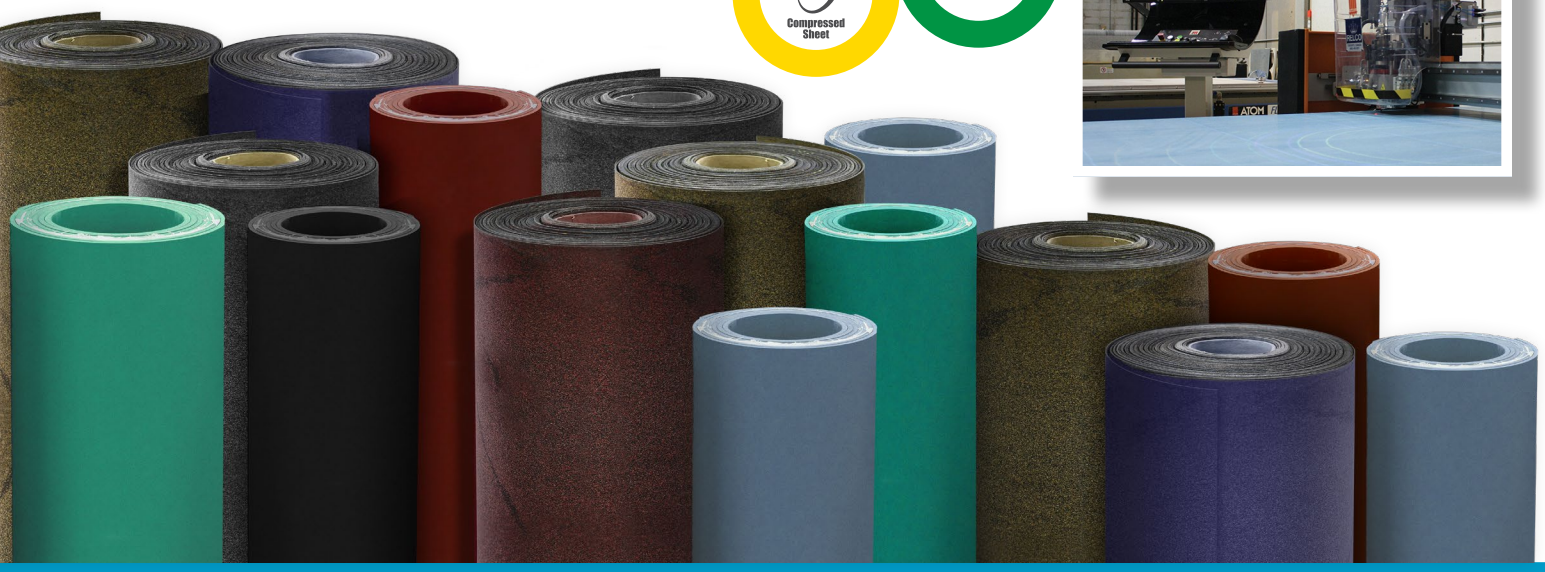
Grafilit® SF
Grafilit® SL
Grafilit® SP

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

Rubber and Plastic

RyFlor™ RF40
Nitrile
Hydrogenated Nitrile
White Nitrile
Nitrile Sponge
Cork/Nitrile
Viton™/Fluorocarbon
PTFE
Ethylene Propylene (EPDM)
Neoprene/Chloroprene
Silicone
Silicone Sponge w/PSA Backing
UHMW-PE
Neo-Nylon
Red Rubber
Vegetable Fibre/Plant Fibre
Natural Rubber

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





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

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.*

Custom Moulded Products



We have collaborated with customers from design to production of superior moulded components for over 34 years. With our experience and extensive range of capabilities, we can provide high performance parts for our customers' unique applications. We are able to 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 customers' requirements. Our knowledgeable professionals assist with the design and material selection for your components. Our end goal is to provide a solution that extends product run time and reduces maintenance costs.

Rubber to PTFE Bonded Products

PTFE is known for being a 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 embraced the challenge and implemented a tried-and-true method that creates a durable and long-lasting bond between the materials. We can bond a range of elastomers including nitrile, hydrogenated nitrile, EPDM, fluorocarbon, and silicone, to both virgin and reinforced PTFE.

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

We offer a vast selection of high-performance rubber materials that meet customers' application requirements. Common rubber moulding materials include:

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

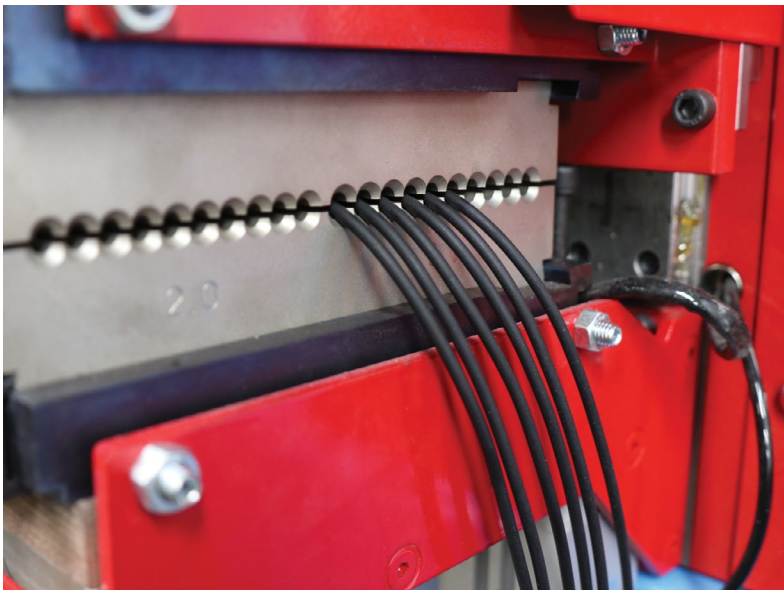
Spliced & Vulcanized O-Rings

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 (splicing). 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 like Super Hi-Glyde lubricant, and much more.

Kit creation program advantages:

- Increased inventory control
- Streamlined processes
- Consolidation of inventory
- Enhances picking and assembly efficiencies
- Increases 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

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 inspection of 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.

Seal Analysis Lab
ENGINEERING & QUALITY INSPECTION



Mid-Infrared FT-IR Spectrometer

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



XRF Gun

Canadian Branches

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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

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

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Polymer Concepts Technologies PBY, Inc. | 2571 E. Lindsay Privado | Ontario, CA | United States | 91761 | Ph: 909.930.6700

Microflex Technologies, Inc. | 430 W Collins Ave | Orange, CA | United States | 92867 | Ph: 714.937.1507

Polis SRL | Via Artigianale, 19 | Loc. Cignano Offlaga, BS | Italy | 25020 | Ph: +39.030979304

ROW, Inc. | 729 W. Winthrop Ave | Addison, IL | United States | 60101 | Ph: 630.628.9221

Novotema S.p.A. | Via S. Giovanni delle Formiche, 2 | Villongo, BG | Italy | 24060 | Ph: +39.035926530

04/2024

Exclusive Provider of Leading Brands

KasPeX™ PEEK | BoKure™ Urethane | WolCar™ Carbide | SUPER Hi-Glyde™ O-Ring Lubricant

RyFlor™ | AraLite™ Compressed Sheet | TechCera™ Ceramic | BoKure™ GHOST