

SEALING SOLUTIONS

With over 100 years of product innovation and advanced engineering experience, Interface Performance Materials, Inc. (Interface) analyzes sealing requirements and provides optimal solutions for even the most demanding applications across the heavy-duty diesel, small engine, industrial, automotive and related industries. Our rigorous performance testing procedures and millions of miles of successful in-field use validate robust solutions that meet or exceed global OEM requirements.



COMMON APPLICATIONS

Our extensive sealing portfolio includes, but is not limited to, solutions for the following common applications.

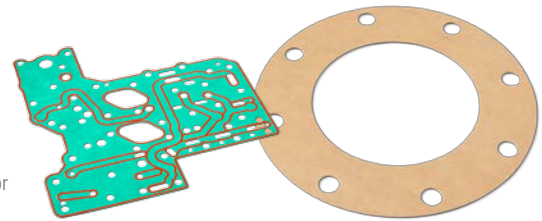
AUTOMOTIVE <ul style="list-style-type: none">axle coversaxle tube and disconnectdown pipes and collectorsexhaust manifolds and headersfront and rear covers and oil pansoil pumps and oil filter adaptersother driveline connectionsstarter and solenoid coversthrottle body and EGR valvetop covers and valley coversturbo chargerwater pump and thermostat housings	VEHICLE <ul style="list-style-type: none">door and liftgate hingessteering motor mountsthermal and acoustic shieldingwiper and window control motor covers
HEAVY DUTY <ul style="list-style-type: none">auxiliary pumps/drivesaxle housing and coversaxle hubscharge air coolerexhaust and muffler flangesgear / flywheel housing and coversheat shields and fillersintake manifoldoil coolersoil fill tubeoil filter adaptersoil sump pansrear seal coverturbo chargerwater pumps	SMALL ENGINE <ul style="list-style-type: none">access coversbreathercarburetorcrankcaseexhaustcylinder headhead plateheat shields and fillersintakeoil pumpvalve covers
TRANSMISSION <ul style="list-style-type: none">front/rear extension housingsshift tower and coversvalve body and separator platesspeed sensor coversPTO connections and coverssump panauxiliary applications	COMPRESSOR/INDUSTRIAL <ul style="list-style-type: none">control valvecylinder headdiaphragmsend capsfilter capsflanged pipe connectionsgenerator coversheat shielding and fillersinletreed platesight glasssumpvalve plate
	POWERSPORTS AND RACING VEHICLES <ul style="list-style-type: none">axle cover and hubcylinder basecylinder headexhaustfront and rear coversheader/exhaustintake manifoldoil filter adaptorsoil pumpsPTOsump/oil panvalve bodywater pumps

NON-METALLIC

With over 60 engineered composite materials, Interface offers a large variety of formulations and technologies, including screen printing and coating capabilities that can be combined to create technically reliable, cost-effective solutions.

Fiber Composite

- Various material thicknesses are available
- For screen printed solutions, the polymer is selected and the profile designed to accommodate seal requirements and optimize flange load distribution
- Rubber coatings are available and can be custom selected to application requirements
- All Interface products are 100% asbestos and solvent free and can serve as a direct replacement for asbestos-containing materials up to 290°C (550°F)



RUBBER EDGED COMPOSITE

Select-a-Seal® rubber edged composite (REC) technology combines compressive and adhesive sealing using an elastomeric edge on an engineered composite carrier. The edge elastomer adhesive properties help maintain the seal over time, while the density and pore structure of the composite carrier provide stable bolt load retention and conformity to flange surfaces. With Select-a-Seal® REC technology, the appropriate edge and base combination is custom designed to application requirements.

Select-a-Seal®

- Rubber edge provides superior adhesion and a durable seal, yet is easily removable from flanges
- Composite base is engineered for mechanical strength and stable bolt load retention
- Superior shear resistance, physical strength and temperature resistance
- Conforms well to flange surface finishes, flatness and irregularities
- Light weight, corrosion resistant and can help minimize noise and vibration
- Patented manufacturing process for rapid prototyping



METAL

Our highly durable and heat resistant metal solutions are well suited for fluid and high temperature sealing applications throughout the engine and exhaust system. Single and multi layer constructions can be customized to include embossments and many different rubber and high temperature coatings to meet application requirements. Our metal solutions have excellent mechanical strength and stability, are corrosion resistant and perform well under extreme conditions.

Single and Multiple Layer Embossed

- Engineered for exhaust system applications up to 900°C (1,650°F)
- Excellent thermal stability and inert in most chemical environments
- Excellent mechanical strength and stability, corrosion resistant and performs well under extreme conditions
- Variety of coatings can be added to improve release properties, microseal properties and anti-fretting



Rubber Coated Metal (RCM)

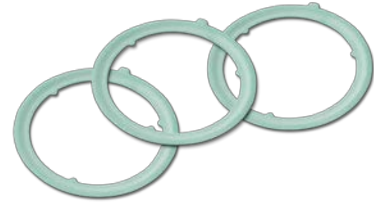
- Engineered for higher torque retention and close tolerance requirements
- Variety of coatings available including NBR and fluoroelastomer, for excellent flange microseal ability
- Can be applied to cold rolled steel, aluminum and stainless steel substrates in various thicknesses
- Custom assembly/retention features available



METAL (Continued)

High Temperature Coated Metal

- Proprietary coating engineered for high temperature applications up to 800°C (1,472°F)
- Ability to withstand high temperatures and retain a low coefficient of friction allowing gasket to accommodate joint movement due to thermal expansion
- Excellent flange microseal ability
- Single and multiple layer options available to meet application requirements



LAMINATES

Global leadership in material development enables Interface to provide a wide range of custom laminated materials, suitable for high performance applications. Our laminates have excellent sealing characteristics, erosion resistance and competitive pricing. A variety of laminating options including bond-for-life technology, allow for better surface conformability than typical coated metal solutions. Interface laminates support end-user initiatives for weight reduction, smaller packaging requirements, decreased tooling costs and more.

Expanded Metal Core

- Composite facings chemically and mechanically fused to a steel core
- Designed for elevated temperature and dynamically stressed joints
- Excellent sealability, load retention, chemical resistance and structural strength
- Superior radial strength and thermal integrity
- Anti-stick coatings available including graphite, PTFE-based and vermiculite dispersion



Mechanically Clad Composite (MCC)

- Engineered for high temperature, hot gas applications up to 750°C (1,400°F)
- Composite core with 0.20mm (0.008") electrolytic tin-plated steel mechanically bonded to one or both sides
- Excellent thermal barrier material for heat shield applications



Mechanically Bonded Fiber (MBF)

- Engineered for high temperature, hot gas applications up to 650°C (1,200°F)
- Composite blend, inorganic filler and low-content binder facing mechanically clinched to a 0.20mm (0.008") tin-plated steel core
- Resilient and compressible, with excellent radial strength
- Oil, coolant and fuel resistant



Mechanically Bonded Graphite (MBG)

- Engineered for high temperature, hot gas applications of 550°C (1,000°F) and higher
- Expanded graphite facings mechanically bonded to a 0.20mm (0.008") tang perforated tin-plated steel core
- Naturally lubricious, compressible and resilient with excellent bolt torque retention, chemical and heat resistance
- Thermally anisotropic heat transfer characteristics
- Coatings can be added for improved release properties and microseal
- Optional steel reinforced ports for increased bore loading and higher temperature and pressure application



VBL-454

- Engineered specifically for automotive and heavy-duty automatic transmission valve body applications
- Composite mechanically bonded to 0.50mm (0.02") steel core
- Composite facings provide excellent sealability and erosion resistance, while the steel core provides stiffness for channel bridging and accurate through-plane oil flow metering
- Robust properties provide solutions for key market demands including weight reduction (up to 30% compared to traditional technologies), close tolerance packaging and precision assembly
- Unique bonding capabilities allow for single stamp manufacturing, reducing the piece price by up to 50% in some cases



CONTACT

North America

216 Wohlsen Way
Lancaster, PA 17603
+1 717.207.6000

Europe and South America

+33.5.5929.1220

Asia Pacific

+8621.5238.5650

India

+91.44.42023512

For more information, please visit www.InterfaceMaterials.com
or contact an application engineer, AE@InterfaceMaterials.com.