

PRODUCTS & SERVICES

International manufacturer
& supplier of specialised
sealing products & services.



FLEXITALLIC

THE FLEXITALLIC GROUP IS THE INTERNATIONAL MARKET LEADER IN THE MANUFACTURE AND SUPPLY OF HIGH QUALITY, HIGH VALUE INDUSTRIAL STATIC SEALING PRODUCTS.

ABOUT US

As the developer of the spiral wound gasket in 1912, we have built on this legacy of innovation with revolutionary products including Thermiculite®, Sigma®, Change™ Gasket and more recently Corriculite®, our tightest sealing material, which is set to transform the global sealing industry.

We have a global network of Allied Distributors across 30 countries. This ensures local demand is met quickly, providing a combination of the highest product quality and outstanding customer service.

Our extensive and varied product offering includes spiral wound gaskets, RTJ gaskets, Flexpro™ Kammprofiles, sheet materials, dynamic and static packings, pipe support and custom rubber products. Drawing upon the group's rich history and present day values of leadership, quality, service and technology, we are at the forefront of developing sealing solutions for industries around the world.

In addition to a wide range of products, we also deliver world-class technical support and Joint Integrity training.

OUR MISSION

MAKING THE WORLD SAFER AND CLEANER THROUGH ENGINEERED SEALING SOLUTIONS.





Flexitallic Global Locations

BASED ON SALES AND GEOGRAPHIC REACH, THE FLEXITALLIC GROUP HAS BECOME *THE* GLOBAL SUPPLIER OF INDUSTRIAL GASKETS.

INNOVATIVE PRODUCT RANGE

We have a rich history of innovation, which has seen us lead the industry with many new products.

Over the years, our products have gained a reputation for quality, reliability and technology that is second to none.

CUSTOMISED ENGINEERING SOLUTIONS

Our Application Engineering, Production Engineering and R&D teams work closely together to design, develop and manufacture bespoke sealing solutions. We have been responsible for a number of truly revolutionary products, including Thermiculite®, Sigma® and Corriculite®, which ensures we are able to continually meet the ever more stringent requirements of our customers.

FLEXITALLIC® SAFE

Over the last century, our aggressive R&D efforts have helped customers become Flexitallic® Safe. From the first Spiral Wound Gasket in 1912 to the ever evolving applications for Thermiculite®, our goal is to develop materials that push the parameters of heat, pressure and chemical resistance.

OUR COMMITMENT TO QUALITY

We place great emphasis on maintaining international quality standards, and are approved to ISO 9001: 2015, ISO 14001:2015, ISO 45001: 2018, API 6A and API 17D, to ensure we meet the highest possible standards for all our products and services. We also invest heavily in test and quality assurance equipment to maintain our reputation for the highest quality products.

Our materials are subjected to a wide range of tests as specified by statutory regulations and customer requirements. These approvals enable our customers to make informed choices as to the suitability of a product for each and every application.

INSIDE INDUSTRY

We pride ourselves on not simply supplying products, but by supporting customers with a detailed knowledge of their industry and applications, so that products and services are tailored to their specific needs. This unique approach means that we focus on providing more than just a product, but also a complete solution that adds genuine value to our clients.

GLOBAL DISTRIBUTION... LOCAL SUPPORT

Our products are distributed through a global network of Allied Distributors. These carefully selected distribution partners are strategically located within their territory to deliver the best possible service and products to our customers. This approach means our products and know-how are available to the global industries we service.

Allied Distributor



Licensee Manufacturer



OXYGEN CLEAN ROOM

FLEXITALLIC BECOMES THE FIRST MANUFACTURER IN THE MIDDLE EAST AND AFRICA TO INSTALL AN ISO CLASS-7 VALIDATED CLEAN ROOM FOR OXYGEN SERVICE GASKETS, LOCATED IN RAS AL KHAIMAH, UNITED ARAB EMIRATES.

Flexitallic has invested in its Ras Al Khaimah, UAE manufacturing facility to support Middle East and Africa customers by installing a ISO Class-7 validated clean room to supply Oxygen Cleaned Gaskets in line with the CGA G-4.1 procedure.

An ISO Class 7 clean room creates a controlled environment that adheres to specific cleanliness standards established by the International Organization for Standardization. An ISO validated clean room is an essential and additional guaranteed step to maintain the extreme cleanliness of products used in Oxygen service, ensuring the safety, reliability and quality of the product.

Gaskets for Oxygen service must be cleaned, packed, and labelled as per Flexitallic Standard Operating Procedure inside the ISO Class-7 clean room by trained professionals.

The ISO classification system defines the clean rooms based on the maximum number of airborne particles allowed per cubic meter of air. **The standard permits no more than 352,000 particles that are 0.5 micrometers or larger in size.**

To meet the clean room standard several measures are employed. To follow CGA G-4.1 procedure, specialized ventilation systems, high-efficiency particulate air to remove particles from the air, controlled airflow patterns, strict protocols for personnel entering and working within the clean room. These measures help to minimize the particles and other contaminants, ensuring a controlled and clean environment for sensitive processes.

Non-metallic gasket material used for Oxygen service are 'BAM' tested, inspected and packed in the clean room.

FLEXITALLIC SIGMA®

(Biaxially orientated PTFE) is BAM certified, packed within the ISO Class 7 validated clean room and safe for Medical Oxygen service



NOVUS 34/SF4300 (CNAF GASKETS)

Is BAM certified and packed within the ISO Class 7 clean room



OXYGEN CLEAN ROOM

GASKETS FOR OXYGEN SERVICE MUST BE CLEANED, PACKED, AND LABELLED AS PER FLEXITALLIC STANDARD OPERATING PROCEDURE INSIDE THE ISO CLASS-7 CLEAN ROOM BY TRAINED PROFESSIONALS.

Oxygen cleaning can be offered (on request) on our range of sealing materials including:

THERMICULITE®

High temperature gasket material for temperatures up to 1000°C

CORRICULITE®

Superior sealing material for proactive corrosion prevention

CHANGE™

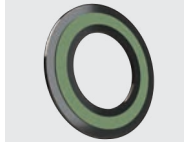
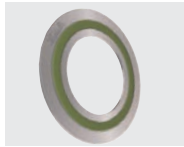
For thermal cycling conditions e.g., heat exchangers

FLANGE RESCUE GASKETS

Solution for Flange Face Corrosion

ISOFLEX™ -FS

Flange Isolation Gaskets
- **Fire Safe** as per **API 6FB** and exceed **MESC SPE 85/300-2017 fugitive emission Class A** requirements and **NACE compliance**.



Other products such as **Spiral Wound Gaskets, RTJ Gaskets, Flexpro® / Kammprofile Gaskets** can also be cleaned for Oxygen and corrosive applications.

In addition, Flexitallic LLC is accredited to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

To find out more about our clean room operations and how we can support you with the highest levels of service and expertise, please send enquiries to Sales@flexitallic.ae.



SEALING SOLUTIONS FOR HYDROGEN SERVICE

THERE IS SIGNIFICANT WORLDWIDE MOMENTUM
BEHIND HYDROGEN AS A MAJOR CARBON
FRIENDLY FUEL AND ENERGY SOURCE.

Sealing Hydrogen gas applications presents two major challenges. Hydrogen gas is a very small molecule, meaning that gasket materials must have tight internal structures and good ability to conform to mating flanges. Hydrogen gas is also extremely flammable. These two phenomena make reliable sealing in industrial processes extremely important.

HYDROGEN IS PRODUCED BY THREE MAIN PROCESSES:

1. **Green hydrogen** - manufactured through the electrolysis of water using wind/solar/excess grid capacity. This is a relatively low temperature manufacturing process.
2. **Grey Hydrogen** - natural gas is split into hydrogen and CO² either by Steam Methane Reforming (SMR) or Auto Thermal Reforming (ATR). Includes high temperature and Pressure (up to 300 Bar) production processes.
Blue Hydrogen - uses carbon capture and storage for the greenhouse gases produced in the creation of grey hydrogen.
3. **Brown Hydrogen** - is created from hydrocarbon-rich feed stock, such as methane gas, coal, or other fossil fuels. Includes high temperature and pressure production processes.

Volume storage methods will include repurposed offshore gas fields and subterranean brine caverns. Distribution will take place through existing, repurposed, pipework infrastructure. Pressures are expected to range between 60 and 80 Bar in distribution.

FLEXITALLIC SEALING SOLUTIONS FOR HYDROGEN SERVICE

Flexitallic manufacture sealing solutions for hydrogen production and storage operations, which:

- Provide significantly tighter sealing than commonly used legacy sealing technologies.
- Allow significantly more energy to be stored in the bolted connection, mitigating long service, component relaxation.
- Provide *Best in Class* gasket resilience, enhancing sealing reliability in pressure/thermal cycling applications.
- Offer *Best Available Technology (BAT)*, high temperature sealing. Providing exceptionally reliable, high temperature sealing and connection tightness.
- Remove the potential for galvanic corrosion, common to graphite sealing solutions.



PRODUCT RANGE FOR HYDROGEN SERVICE

CORRICULITE®, THERMICULITE®, CARRIER RINGS, CHANGE™, ISOFLEX™-FS

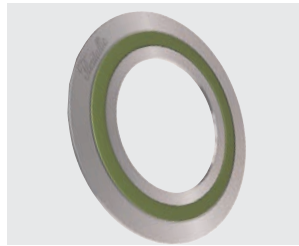
CORRICULITE® is ideal for hydrogen and is incorporated into traditional sealing platforms such as Spiral Wound, Flexpro® and Change™ gaskets. Corriculite® is approved fire safe to API 6FB and is suitable for applications ranging from 150# to 2500# ASME class connections.

THERMICULITE® is the only true high temperature sealing material and coupled with a 20-year success story means it is a proven solution for all extreme applications up to 1000°C. Thermiculite® gaskets are significantly tighter than graphite across the operating stress range. They are thermally and electrically isolating and provide long term, reliable high temperature performance even in thermal cycling.

For applications 150# to 2500#. Ideal for repurposing storage and distribution pipework, previously sealed with ring type joints. **CARRIER RINGS** can be wound with either Corriculite® and Thermiculite®, depending on operating conditions

Originally designed to solve the issues associated with sealing shell and tube heat exchangers, **CHANGE™** gaskets offer BAT for all pressure cycling and thermally cycling applications, providing at least eight times the reliability of other sealing technologies. Change™ is fire safe to API 6FB.

The **ISOFLEX™-FS** Design eliminates the concerns and pitfalls of existing products on the market and provides best in class flange isolation and asset protection against galvanic corrosion. The sealing element of the ISOFLEX™ isolation kit is faced with Corriculite®, making it corrosion resistant, API 6FB fire safe, and significantly tighter than other market alternatives.



CHANGE™ GASKET

**ENGINEERED LIKE NOTHING ELSE.
TO PERFORM LIKE NOTHING ELSE.
WHAT A CHANGE™.**

When we invented the spiral wound gasket in 1912 there was nothing like it. 100 years of innovation later, we introduce the Change™ gasket. Again, there's nothing like it.

Incredibly robust and resilient, the metal-wound Change™ heat exchanger gasket is designed to deliver the most dynamic seal ever.

The Change™ gasket is manufactured with proprietary equipment, using a 5-times thicker metal spiral and a unique laser welding process that penetrates completely through the winding, so it requires no inner or outer ring and is easy to handle and install as a double-jacketed gasket. Best of all, it's proven to perform without fail at least 60% longer than any other heat exchanger gasket - spiral wound, double jacketed, corrugated or kammprofile.

BENEFITS

- Excellent compression and recovery
- High performance in thermal cycle applications
- Robust and versatile design
- Fire-safe (API 6FB)

Gasket Installation Services are available via our team of Integrity Engineers who will assure Leak Free start up.

THE CHANGE™ GASKET. UNIQUELY MANUFACTURED.

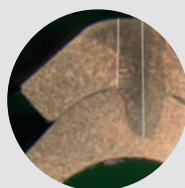
SHAPE

- Unique wire profile
- 304, 316L & other materials
- Develops a uniquely solid gasket



LASER WELDED

- Higher unit adhesion
- Pin point accuracy
- Solid construction



PROVEN TRACK RECORD ON THE FOLLOWING APPLICATIONS

- Shell & Tube Heat Exchanger
- Boiler Manway
- Seawater Strainer
- Raised Face Flanges
- FCC Unit - both Reactor and Regenerator
- Chlorination Reactor Vessel
- Fin Fan Cooler
- Transfer Line Exchanger

change™



THERMICULITE®

ANOTHER FIRST FOR FLEXITALLIC. THERMICULITE® - THE COMPLETE SEALING SOLUTION.

Thermiculite® is specified by name where critical sealing matters. Applications include Petro chemicals, Fertilisers, OEM and Oil & Gas applications, where process conditions are extreme.

Our experienced engineers use the versatility of Thermiculite® to create bespoke sealing configurations in equipment and piping systems to increase operational up-time for our customers. This truly remarkable product has proven itself as an effective long-term sealing solution in over 600 of the most demanding industrial sealing applications.

Thermiculite® is a patented product with amazing versatility. Not only can it withstand high temperatures and corrosive environments, due to our unique formulation, we are able to offer Thermiculite® as a stand alone sheet material, as a filler for SWG's, as a facing for Kammprofiles and also in many of our other product lines.

We have also developed a range of valve stem packings, using Thermiculite® technology, for use in the most arduous service.

PROVEN TRACK RECORD IN THE FOLLOWING INDUSTRIES

- Power Generation
- Fertiliser (Agro-Chemicals)
- Oil Exploration
- Industrial Chemicals
- Automotive
- Aerospace
- Oil Refining
- Emerging Technologies (Solid Oxide Fuel Cell)

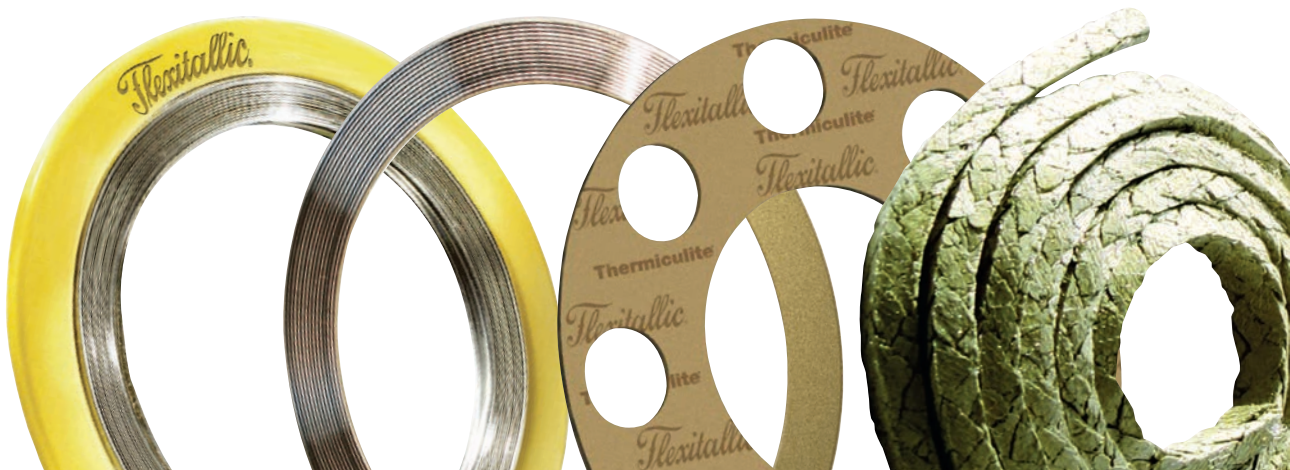
PRODUCTS

- 700-800 Series - sheet grade
- 866 - specialist grade (SOFC)
- 896 - aerospace
- Kammprofiles
- SWG
- Static and Dynamic Packings
- FRG

BENEFITS

- Engineered and Manufactured in the UAE/UK
- Fire-safe (API 6FB)
- Wide temperature range - cryogenic to 1000 °C
- TA Luft approved
- Wide availability of styles of gaskets
- Free from oxidation
- Excellent chemical compatibility
- Electrical and thermal insulation
- Universal
- Replaces graphite, PTFE, non-asbestos materials

Thermiculite®



CORRICULITE®

CORROSION MANAGEMENT GASKETS

PREVENTING FLANGE FACE CORROSION IN SEAWATER AND HYDROCARBON SERVICES.

Responding to customer demands for an improved material with strong anti-corrosion characteristics Flexitallic has created Corriculite® - a filler material for spiral wound gaskets specifically designed for use in corrosion-sensitive environments, such as seawater and hydrocarbon services, across a number of industries, including oil and gas, power and marine.

This revolutionary, non-conductive filler material provides sealing performance and corrosion resistance unlike any other gasket material on the market.

Comparative tests show **Corriculite®** delivers corrosion protection and sealing properties that far exceed other materials currently available.

Conventional graphite gaskets for instance, promote the initiation and propagation of corrosion of flanges due to graphite's electrical conductivity and position in the galvanic series, leading to premature failure and leakage.



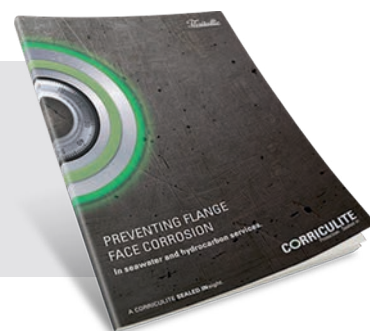
Joints in seawater and hydrocarbon services are vulnerable to gasket degradation and flange face corrosion, which results in increased costs, lost production as well as safety and environmental concerns, unscheduled downtime and reduced plant availability.

BENEFITS

- Engineered and Manufactured in the UAE/UK
- Fire Safe to API 6FB
- Reduced maintenance costs
- Reduces costly shutdowns
- Maintains seal integrity
- Extends equipment life
- Eliminates safety & environmental risks

CORRICULITE®
Protection. Sealed in.

Download the whitepaper on *Preventing Flange Face Corrosion in seawater and hydrocarbon services*, available at www.corriculite.com



EQUIFLEX™

THE FLEXITALLIC EQUIFLEX™ GASKET IS DESIGNED FOR SEALING IN RING TYPE JOINT CONNECTIONS WHERE THE PRESENCE OF CORROSION OR DAMAGE TO THE FLANGE GROOVE COULD COMPROMISE JOINT INTEGRITY.

The Equiflex™ gasket is a semi-metallic gasket with a dual or tandem seal arrangement designed to seal across RTJ flanges where the sealing groove has been corroded or damaged.

The inner seal, located inbound of the ring groove, functions as the primary containment seal while the outer, secondary seal located outbound of the ring groove isolates the groove from the external environment.

Seal type and configuration is dependent on flange geometry and pipe schedule.

For sizes up to and including 2" both inner and outer seals are comprised of precision serrated metal cores. The inner seal is faced with Corriculite®.

For connection sizes greater than 2" the inner seal is comprised of a high performance spiral wound sealing element incorporating Corriculite®. The outer seal is comprised of a precision serrated metal core faced with Sigma® 800, a high compression, structurally modified PTFE based sealing material.

PRODUCTS

- Equiflex™-SWG
- Equiflex™-RJ

BENEFITS

Equiflex™ gaskets are particularly suited for use in the upstream oil and gas sector where they can be used as a direct replacement of RTJ gaskets without the need for expensive and time-consuming groove repair or re-machining.

Equiflex™ gaskets utilise Flexitallic Corriculite® as the primary non-metallic sealing material. Giving exceptional levels of tightness and mitigating the onset of flange face corrosion.

Equiflex™ gaskets are fire safe, complying with the requirements of API 6FB.

The secondary seal prevents ingress into the ring groove from the external environment.

Independent third-party testing has shown that Equiflex™ gaskets can be used across a wide range for sealing face finishes and conditions.

Unlike RTJ gaskets, Equiflex™ are quick and easy to install with no requirement to change assembly bolt load or torque settings.



RIGFLEX™

RIGFLEX™ GASKETS ENABLES INTEGRITY TESTING OF NEWLY ASSEMBLED AND TIGHTENED FLANGED CONNECTIONS WITHOUT REQUIRING COMPLETE SYSTEM PRESSURISATION.

The **RIGFLEX™ FP** gasket is comprised of a precision machined, grooved core with dual Kammprofile elements on opposite sides of the gasket, faced with Corriculite®. The metal core has been drilled and fitted with a high-pressure test pipe and threaded port.

Connection to an external pressure source allows the controlled pressurisation of the annular space between the sealing faces of Corriculite® faced Kammprofile. Monitoring the pressure enables the integrity of the connection to be directly assessed.

The **RIGFLEX™ RJ** gasket is comprised of a precision machined octagonal Ring Type Joint (RTJ) that has been drilled and fitted with a high-pressure test pipe and threaded port.

Connection to an external pressure source allows the controlled pressurisation of the annular space between the sealing faces of the RTJ and ring grooves of the mating flanges. Monitoring the pressure enables the integrity of the connection to be directly assessed.

Gasket are supplied with a fire-safe, high-pressure cap, allowing post-test isolation of the test port.

The gasket can be provided with a hand-operated hydraulic or pneumatic pump and can also be supplied with fittings to suit existing pressurisation equipment.

PRODUCTS

- RIGFLEX™ FP
- RIGFLEX™ RJ

BENEFITS

Testing large-volume piping systems can have significant cost implications. Large volumes of Nitrogen gas are usually required, as well as a dedicated leak-testing team to manage the process. Waiting for piping systems to fill to a desired test pressure can also take a considerable length of time.

RIGFLEX™ gaskets are designed for testing individual flanged connections, negating the requirement for complete system pressurisation.

Post-test, the gasket remains in situ, enabling the connection to be continuously monitored or re-tested.

- Significantly reduces testing time
- Improved HSE by reducing the need for testing personal and volume of (potentially old) piping systems exposed to high test pressures
- Considerable cost savings on test media, such as Nitrogen
- Monitoring of potential leakage after installation allows for proactive maintenance
- Continuous monitoring or spot testing of individual connection
- Corriculite® facings mitigate against flange-face corrosion
- Fire safe per API 6FB



FLANGE ISOLATION PRODUCTS

CORROSION MANAGEMENT GASKETS/ELECTRICAL ISOLATION

FLEXITALLIC ISOLATION SYSTEM, AN INSULATION GASKET TO PROVIDE ELECTRICAL AND THERMAL INSULATION USING CORRICULITE®.

We provide a complete product range to limit corrosion in pipeline systems, using our unique anti-corrosion material Corriculite® - giving an unrivaled performance.

The insulating sets are designed to electrically isolate flanges and bolts in cathodically protected piping systems or whatever dissimilar metals are present.

The specially engineered materials used in the ISOFLEX™ isolation system are also able to extend traditional operating temperature pressures and chemical compatibility, and is aimed at eliminating the concerns and pitfalls of existing market offerings.

BENEFITS

- Engineered and Manufactured in the UAE/USA
- Exceeds dielectric and sealing capabilities of all current market products
- Available as individual gaskets and full isolation set
- Fire Safe - API 6FB approval for fire safe insulation gasket
- Cryogenic to 200°C temperatures
- Exceeds MESC SPE 85/300 2017 Fugitive Emissions
- Can be used on all types of flanges
- Offers protection against both Cathodic and Galvanic Corrosion

PRODUCT RANGE

ISOFLEX™-FS

ISOFLEX™-FS is a fire-safe isolation gasket that is ideal for high pressure and critical service applications.

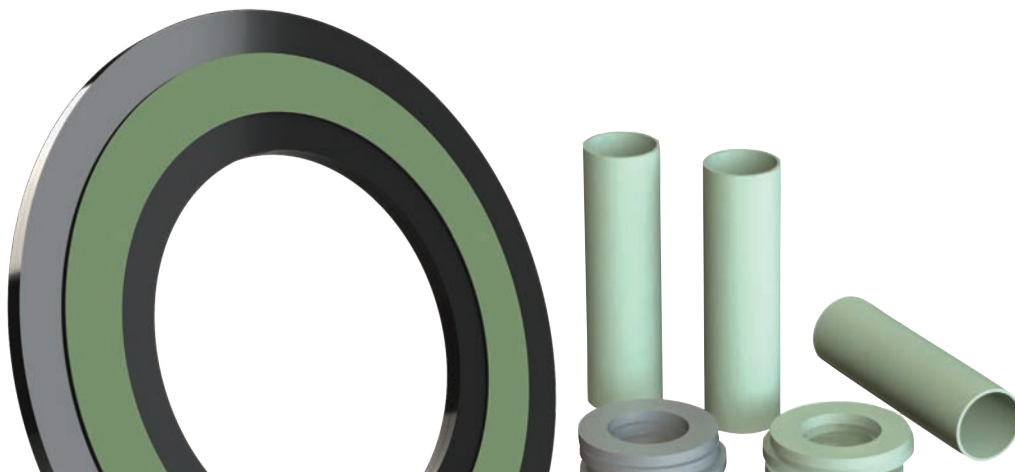
ISOFLEX™-HP

ISOFLEX™-HP is a flange isolation gasket that is ideal for high pressure and critical service applications.

ISOFLEX™-LT

ISOFLEX™-LT is less susceptible to localized flange damage and seals better than inclined plane style gaskets.

Download the Flange Isolation Products brochure for more information.



FLANGE RESCUE GASKETS

CORROSION MANAGEMENT GASKETS

WINNER OF THE 2013 NACE CORROSION
INNOVATION OF THE YEAR AWARD.



The FRG range of high performance sealing solutions is the latest innovation for challenging, corrosive environments. Developed in direct response to the oil and gas industry's requirement for effective closure on damaged flange faces, with additional corrosion inhibiting properties, it is now helping to mitigate corrosion problems throughout industry.

The fight against corrosion is a constant battle. Internal corrosion and damaged flange faces are responsible for a significant proportion of hydrocarbon releases and can have a major impact on operating costs, particularly on ageing assets.

The FRG can be used to seal on damaged flange faces where previously only very costly or time consuming options existed.

By using the FRG range it helps you to fight the corrosion battle head on.

BENEFITS

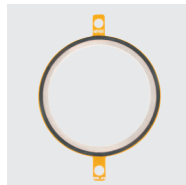
- Engineered and Manufactured in the UAE/UK
- Significant cost savings
- Speeds up maintenance downtime
- Fire-safe to API 6FB
- Topside/subsea variants
- Bespoke designs available

THE FRG PRODUCT RANGE:



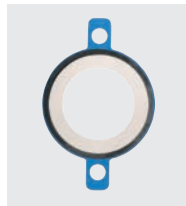
FLANGE RESCUE GASKET - ORIGINAL

- Restricted Sigma® PTFE bonded to high integrity metal core
- Leak-free seal and blow out resistance
- Bright & easily identifiable for inspection
- Corrosion resistant coating.



HF ALKYLATION

- Low stress sealing Sigma® - a tighter seal
- Fire-safe graphite faced serrated metal core
- Designed for ease of identification with problematic connections on HF Acid Plants.



CRYOGENIC

- Aluminium core as standard
- Core material can be adapted to match the flange materials
- PTFE ring performs in temperatures from cryogenic to 260°C.



FIRE SAFE

- Thermiculite® high temperature insulating corrosion resistant material
- Certified to API 6FB for fire-safe applications.



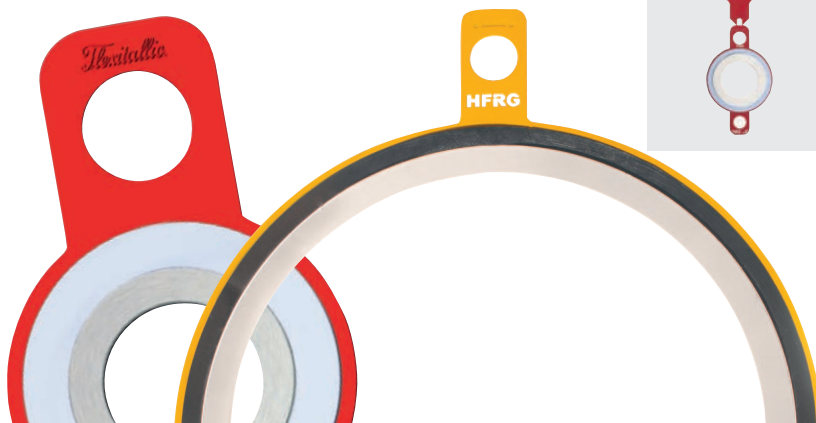
HIGH PRESSURE

- Stops turbulent media flow to prevent erosion, corrosion and flange degradation
- Available in Style R Oval, R Octag, RX and SRX
- Ideal for topside or sub-sea applications.



FRG SUBSEA

- Easy sub-sea installation with integrated removable handle
- Use to connect RTJ & RF flanges.



SIGMA[®]

FOR APPLICATIONS WHERE CHEMICAL RESISTANCE IS PARAMOUNT, SIGMA[®] IS THE ONLY OPTION.

Utilising a unique manufacturing process exclusive to Flexitallic, SIGMA[®] represents the latest generation of biaxially orientated PTFE materials.

All components in the SIGMA[®] range are FDA compliant. The material's clean nature makes it ideal for use where product contamination is of concern, such as food, pharmaceuticals and electronics.

The chemical resistance and dimensional stability of the material ensures total sealing reliability and minimises fugitive emissions.

To further enhance our product portfolio, we can offer expanded PTFE sheet sealing material (ePTFE) and Gasket Tape.



For more information on the above products please contact our Applications Engineering Team.

PRODUCTS

500 511 533 588 600

BENEFITS

- Engineered and Manufactured in the UAE/UK
- Cryogenic to 260°C
- Outstanding chemical resistance across pH range
- Suitable for low bolt load applications
- Materials available in a range of different sheet sizes and thicknesses
- FDA compliant
- WRAS approved
- Available for oxygen service
- Easy to handle and cut



SHEET JOINTING

THE FLEXITALLIC RANGE OF COMPRESSED FIBRE JOINTING IS DESIGNED FOR A WIDE RANGE OF INDUSTRIAL AND ORIGINAL EQUIPMENT APPLICATIONS, WHERE SEALING PERFORMANCE AND SPECIFICATION IS ESSENTIAL.

A comprehensive range of grades are available covering a wide spectrum of applications.

In addition, the materials can be supplied in private brand and colour formats to ensure your company or customer is accorded recognition.

The jointing can be supplied as sheet or as cut gaskets, either to standard or non-standard dimensions.

PRODUCTS

Flexitallic SF2401, SF2800, SF3300, SF3500, SF4300, SF5000/1, SF2500.

Novus 10

Novus 30

Novus 34

Novus 45

Novus 49 (Graftec)

Novus 26, 28, 29, 40, 48 (Acid), HDS1



BENEFITS

- Engineered and Manufactured in the UAE/UK
- Wide range of service applications
- Easy to handle and cut
- Good bolt torque retention
- Reliable for general service chemicals

GRAPHITE

Exfoliated graphite products are designed for demanding, general industry applications typical of the petrochemical and refining industries.

Manufactured from high purity exfoliated graphite, our products are available with a variety of metallic inserts and combinations of thickness.

Ultra high purity graphite is available for the nuclear industry, and high pressure grades are also available.

PRODUCTS

RGS1 RGS3 RGS4

BENEFITS

- Wide chemical resistance
- Good compressibility
- Resistent to thermal shock
- Excellent stress retention



SPIRAL WOUND GASKETS

DRIVEN BY THE INDUSTRY'S NEED FOR SAFE, EFFECTIVE SEALING SOLUTIONS FOR INCREASINGLY DEMANDING APPLICATIONS, FLEXITALLIC INVENTED THE SPIRAL WOUND GASKET IN 1912.

Not satisfied with inventing the iconic spiral wound gasket, we have continued to innovate by developing world leading materials.

Thermiculite® is often used as a filler material to provide resistance to temperature, chemical attack and corrosion.

Through precision engineering, the spiral wound gasket, available in unlimited configurations of high quality metals and materials, is individually tailored to meet the demands of each application.

Globally acknowledged to provide a superior seal in the most exacting of conditions, its flexibility and recovery gives it a unique ability to cope with the effects of high pressure, wide temperature fluctuations and bolt relaxation.

Spiral wound gaskets are found in a host of applications across the world, from small diameter turbine gaskets, to HP heat exchangers.

LEAK-FREE START UP

“By using custom designed heat exchanger spiral wound gaskets, we achieved a leak free start up - a first in 15 years.”

Chief Engineer
Leading UK Refinery

PRODUCT RANGE

- Standard Gaskets – Available to a range of international standards including ASME / EN
- Low stress sealing element
- Heat exchangers
- Carrier rings
- OEM
- Application specific designs

BENEFITS

- Engineered and Manufactured in the UAE/UK
- 24/7 manufacturing capability for specialist requirements
- Significant stock holding of standard gaskets
- Flexibility to manufacture and supply gaskets with a combination of inner and / or outer guide rings
- Wide range of machinery that enables us to manufacture any size gasket
- UK centre of excellence supported by global distribution manufacturing
- Custom designs available
- World-class testing and development centre
- Support from our team of Application Engineers



FLEXPRO™ KAMMPROFILES

FLEXPRO™ - THE VERSATILE GASKET WITH THREE KEY FEATURES: COMPRESSIBILITY, LOW STRESS, CONVENIENCE.

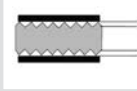
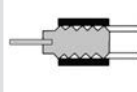
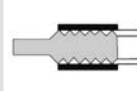
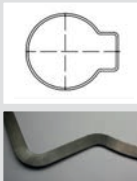
The FLEXPRO™ Kammprofile gasket has three key features: the compressibility of a sheet gasket; the sealability of a spiral wound gasket and the ease of handling a solid metal gasket.

FLEXPRO™ Kammprofile gaskets are the ideal product choice for standard pipeline and heat exchanger applications. They provide a high level of sealing integrity but with the ability to seal at seating stresses normally associated with sheet materials. Kammprofiles are able to cope with high temperatures and pressures making them suitable for heat exchanger service. The product can also be used time and again when correctly refurbished.

BENEFITS

- Engineered and Manufactured in the UAE/UK
- Wide stock of raw materials
- Adherence to the tightest global specifications
- Inspection equipment allowing exact measurement of machined profiles
- TADU machine for very large diameter gaskets
- Thermiculite® technology for high temperature applications
- Custom shapes
- Wide range of machinery
- World class testing and development centre
- Support from our team of Application Engineers

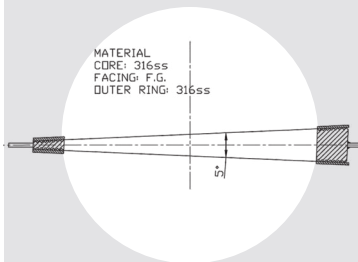
PRODUCT RANGE

	STYLE PN – serrated profile used in confined locations eg heat exchangers
	STYLE ZA – serrated profile with loose outer ring
	STYLE ZG – serrated profile with integral outer ring
	CUSTOM SHAPES – We have developed specialist manufacturing techniques, enabling us to produce FLEXPRO™ Kammprofile gaskets in a wide range of non-circular shapes and sizes.

These are particularly useful for applications that need the narrow sealing element and low stress seating of a kammprofile, but traditionally have had to use lower grade products such as jacketed or metal reinforced gaskets. Applications include oval, obround and square manway and boiler door joints and large rectangle gaskets for fin-fan header boxes.

Contact our Application Engineering Team to discuss specific requirements.

CASE STUDY: WEDGE KAMMPROFILE



We were contacted late one Friday with the problem, by Sunday the product had arrived on site in Nigeria.

The issue was the misalignment of the mating component which meant a standard gasket could not be used, a bespoke Kammprofile was the perfect fit.

This highlights our capability to turn a customer problem into an innovative solution.

“This novel solution certainly solved a problem that looked like it might prevent the successful start up after shutdown.”

Site Shutdown Co-ordination Engineer



RING TYPE JOINTS

THE METALLIC RING TYPE JOINT IS USED IN THE PETROLEUM INDUSTRY, WHERE HIGH PRESSURE APPLICATIONS NECESSITATE THE NEED FOR A HIGH INTEGRITY SEAL.

Every RTJ that leaves our manufacturing facility is identified with key product information to give you the confidence that our products meet stringent application requirements.

In addition, every material that enters our factory is checked using the latest Positive Material Identification (PMI) technology, which combined with our material database, ensures we have full product traceability.

RTJ's were initially developed for use in the upstream petroleum industry and are also commonly used on valves and pipework assemblies, and high integrity pressure vessels.

PRODUCT RANGE

- Style R - oval/octagonal to API/ASME
- Style RX
- Style BX
- Subsea - We are able to supply subsea variants in accordance with API 17D
- OEM design

BENEFITS

- API 6A and 17D approvals
- Specialist coatings available including xylan, silver and zinc
- Wide stock of raw materials
- Wide range of CNC machines
- The latest inspection technology - CNC/CMM
- Custom designs available
- World-class testing and development centre
- Support from our team of Application Engineers

PRODUCT FOCUS: RTJ-KAMM

The RTJ-Kamm gasket

combines the high pressure seal of an RTJ with the low stress sealing of a Kamm. The sealing faces are serrated and faced which means this style is ideal for use with damaged flange grooves or in low load applications.



COMPRESSION PACKINGS

THE CHOICE FOR VALVES AND PUMPS.

Flexitallic offer a full range of compression packings for valve, rotary pump and reciprocating pump applications.

Packings utilise the most advanced production techniques and materials to ensure a high integrity seal in even the most demanding of industrial applications.

Material constructions include PTFE, graphite, carbon fibre, glass and synthetic fibres in a variety of combinations.

For high performance valve applications, we manufacture exfoliated graphite die-formed rings in virtually any size, section or density to suit requirements.



PRODUCT RANGE

- **Compression Packings:**
26D, 26L, 45, 50, 304, 305, 306, 310, 713L, 774, 801, 802, 803, 900, 2001
- **Fugitive Emissions Packings:**
308
- **High Temperature Packings:**
Thermiculite® 894, GP1, GP2, GP125
- **High Temperature Stem Sets:**
TR160, Thermiculite® 894
- **Valve Stem Sets:**
Enviroflex™ 500, Enviroflex™ Hot
- **Die-Formed Rings:**
GR160, TR160

For more information on the full product range available please refer to the Compression Packings brochure on our website.



VELOCITY WASHER™

VELOCITY WASHER™ IMPROVES BREAKOUT TIME BY ELIMINATING GALLING AND IS INSTALLED LIKE A NORMAL WASHER.

With over 100 million hours in use, Velocity Washer™ delivers proven results. Fast, safe, and easy to use, Velocity Washer™ will save you money and reduce downtime with 30x faster breakouts.

Much of the focus on bolted joint integrity is centered around assembly, but assembly is only a portion of the bolted joint's life cycle. Most delays actually occur at disassembly. Galled and seized nuts lead to costly delays, time schedule creep, project creep, and standby time for specialised labor. All of these problems lead to loss of production.

SIMPLE INSTALLATION

Velocity Washer™ can be installed anywhere a hardened washer can with no special tools required. Ready to go straight out of the box, you'll need no costly engineering analysis or change of work procedures. At breakout, simply turn the nut 12 degrees to the left using your standard breakout procedures. The Velocity Washer will pop and all load will be removed, allowing the nut to easily be run off.

No galling. No delays. And increased worker safety by eliminating hot bolting, torches, and unnecessary time on tools.

BENEFITS

- Eliminates galling
- Fast, easy to use
- Increased production
- Reduced downtime and associated costs
- Increased worker safety



TECHNICAL & INTEGRITY SERVICES

“FLEXITALLIC ENGINEERS PROVIDE VALUE FOR MONEY, ENGINEERED SOLUTIONS TO CUSTOMERS ON A GLOBAL BASIS, GIVING ADVICE ON GASKET SELECTION, GASKET USAGE AND TROUBLE SHOOTING ON THOSE DIFFICULT APPLICATIONS. WITH OVER 10,000 DOCUMENTED SOLUTIONS ACCESSIBLE ON OUR GLOBAL ENGINEERING DATABASE THE LIST OF SATISFIED CUSTOMERS CONTINUES TO GROW.”

Dene Halkyard
Technical Director - Flexitallic UK Ltd

BOLTED JOINT INTEGRITY

Flexitallic Application Engineers understand that the use of high quality gaskets, although a prerequisite for joint integrity, are not a guarantee of sealing success.

As a consequence, Flexitallic has a global team of Application Engineers that specialise in bolted joint integrity across a wide range of industries who offer a range of Integrity Services that are designed to complement and enhance Flexitallic's product offering:

- Engineering Drawings
- Bolt Torque and Load Calculations
- Joint Integrity Calculations BS EN1591
- End User Support for Problematic Sealing Applications
- Design Reviews for Bespoke Connections & Critical Equipment
- Piping and Gasket Specifications
- Gasket Selection and Installation
- Pressure Vessel Design Review (Flange)
- Technical Consultation
- Joint Integrity Management Software (JIMS)
- Joint/Flange Integrity Training

For more details please contact our Application Engineering Team.

LIVE CHAT



Do you need help with an application?

Our Application Engineering team have many years of experience and are on hand via our live chat link to answer any questions you have relating to troublesome applications, training our shutdown support.

RESEARCH AND DEVELOPMENT

Flexitallic prides itself on being the leading innovator of new technology within the gasket industry.

We continue to make significant investments in technology in order to support future development of materials and to set new industry benchmarks for the evaluation of existing products.

The UK and US laboratories boast every testing facility expected of a genuine manufacturer of sealing materials. These facilities allow gasket performance analysis under EN 13555 and DIN 28090 to ensure that materials perform as required when deployed into active service.

The facility includes testing equipment described below and some specific R&D test tools such as chlorine ion measurement and some electrical potential measurement.

AMTEC Gasket Tester
AMTEC High Temperature Testing (900°C)
Methane AMTEC Tester
Gasket Testing
Shell Thermal Cycle Testing
Solid Oxide Fuel Cell - Leakage Testing
Stereo Microscope
Durability Testing
ThermoGravimetric Analyser (TGA)
Differential Scanning Calorimeter (DSC)
Infra-Red Spectrometer (FTIR)
Particle Size Analyser
Surface Area Analyser



SHUTDOWN SUPPORT

DURING SHUTDOWN PERIODS, TIME IS THE MOST VALUABLE COMMODITY, MAKING GOOD PLANNING A MUST. TO THIS END FLEXITALLIC OFFER A COMPLETE SHUTDOWN SUPPORT SERVICE.

SHUTDOWN SUPPORT

Major maintenance events require not just the supply of good quality products, but also practical support before, during, and after the shutdown.

We have developed a range of services, designed to support major refinery and process customers during shutdown periods.

“WE UNDERSTAND OUR CUSTOMERS BETTER FOR THEIR EMERGENCY SHUTDOWN REQUIREMENTS. WE ARE FULLY PREPARED AND COMMITTED TO SUPPORT WITH APPLICATION ENGINEERING, DESIGN OF GASKETS, MANUFACTURING AND ON TIME DELIVERY WITHOUT COMPROMISING THE SAFETY AND QUALITY”.

Jayasankar Njattuveetil Ambujakshan
Managing Director

These services include:

- Gasket specification review
- Pre-service assessment
- Dedicated team of Field Engineers able to visit site and offer design recommendations and solutions
- Access to web-based **Turnaround Manager™**, resulting in quicker turnarounds and cost savings
- Rapid response mobile service unit
- 24/7 manufacturing capability to produce an extensive range of gasket types
- Experienced Field Engineers available 24 hours
- Training available via The Academy of Joint Integrity to ensure correct gasket installation

For further information please contact
Sales@flexitallic.ae

CASE STUDY: ROMANIA



OMV Petrom Romania site required our assistance to install a critical gasket during a major shutdown. Our engineer supervised the entire installation of a specially designed Thermiculite® Kammprofile on the main reactor flange, resulting in a leak free start up on a critical vessel during a major shutdown, which enabled the site to meet industry best practice according to ASME PCC-1-2013.

Gasket Installation Services are available via our team of Integrity Engineers who will assure Leak Free start up.



PROJECTS TEAM

OPERATING ON A GLOBAL BASIS AND COMBINING THE RESOURCES OF THE FLEXITALLIC GROUP, FLEXITALLIC PROJECTS OFFERS A DEDICATED SERVICE TO THE WORLDWIDE ENGINEERING & CONSTRUCTION INDUSTRY.

Our specialist team offers a comprehensive service from initial tendering through to final product delivery. Drawing on the vast manufacturing capabilities within the Flexitallic Group, we are able to offer a wide range of high quality sealing products as well as first class technical support and advice.

Either working directly with EPC contractors or via our Allied Distributors, we are involved in a wide range of projects across the world, including Oil & Gas Upstream, LNG, Gas Caption Plants, Fertilisers, Chemical, Petrochemical, Refineries, Power Plants, Renewable Energy, GTL plants, FPSOs amongst many others. With our unrivalled global reach we are also able to offer local manufacturing and after sales support for further requirements once projects are operational.

WE OFFER

- Application review and recommendation
- Custom gasket design
- Site support
- Torque value recommendation
- Flange integrity/installation training

It is usual to have

- PMI Test
- 100% material traceability
- EN 10204 2.1 and 3.1 Certificate
- Manufacturing Record Book (MRB) documentation.

Our global experience includes work on the following projects:

ADNOC – Refinery, BAB Integrated, Bu Hasa, Habshan, Qusahwira (UAE)

Saudi Aramco - Marjan (Saudi Arabia)

TotalEnergies - Tyra TEG & (Denmark)

KOC Lower Fars (Kuwait)

TenneT – Hollandse Kust (Netherlands)

Dangote (Nigeria)

Donges (France)

DUQM (Oman)

Haor (Azerbaijan)

Kall (Belgium)

Pertamina (Indonesia)

Valero (UK)

West Nile Delta (Egypt)

West Qurna (Iraq)

Flexitallic Projects can be contacted on:

projects-me@flexitallic.ae or Tel +971 7 202 5300

Flexitallic
PROJECTS



THE ACADEMY OF JOINT INTEGRITY

THE ACADEMY OF JOINT INTEGRITY CAN PROVIDE A RANGE OF COMAH COMPLIANT CERTIFIED TRAINING COURSES, AND ON-SITE INTEGRITY AUDITS.

TRAINING COURSES

The Academy of Joint Integrity offers Accredited and Awareness Training Courses to all personnel who are involved in the assembly and tightening of flanged bolted connections. Mentoring and assessment programmes also complement the training provision. All our training courses are given by industry professionals who themselves have current and relevant industry-based experience.

The Academy has contributed to the latest Energy Institute Guidelines for the Management of Integrity of Bolted Joints in Pressurised Systems, and is also an active member of an ASME sub-committee, developing new initiatives for Pressure Boundary Bolted Flange Joint Assembly.

Courses are delivered by industry experts with extensive site experience and utilise a combination of practical and theoretical training and assessment, and are aligned to International Standards:

ASME PCC 1 Appendix A

Training and Qualification of Bolted Joint Assembly Personnel.

EN1591-4:2013

Qualification of Personnel Competency in the Assembly of Bolted Flanged Joints.

EN 1591-1:2013

Flanges and their joints. Design rules for gasketed circular flange connections. Calculation - Awareness.

ECITB Route to Competency and Mechanical Joint Integrity

Critical Bolting Units - MJ110.

IChemE Approved Courses

Site-specific approved courses in accordance with International Standards.



“Fundamental to successful joint integrity is the training of the personnel involved in the process of inspection, assembly and tightening of bolted connections.

The Academy provides a range of cost effective tailored training courses to suit the needs of the client or contractor.”

Gary Milne

Technical Training Manager

LOCATION

The Academy has dedicated facilities in Aberdeen, Teesside, Ellesmere Port, West Yorkshire, Humberside and South Wales. Training is also offered within our overseas operations.

COURSES

Training can be delivered in a variety of ways:

- At the Academy, utilising our purpose built training centres
- At the clients premises, utilising mobile training rigs and equipment
- Via 'Blended Training' using a web based learning portal with a unique E-Learning programme.

BENEFITS

- Legislation compliance
- Motivated workforce with best practice skills
- Reduced costs with increased asset integrity
- Access to the latest technical standards and procedures
- Sealing and integrity modules providing greater knowledge
- Alliance and structured support from a world class technical / training team

For further information on the range of courses available visit www.academyofjointintegrity.com or call +44 (0)1274 860795



The Academy of Joint Integrity™



PRODUCT RANGE:

- Corriculite®
- EQUIFLEX™
- RIGFLEX™
- Change™ Gasket
- Thermiculite®
- ISOFLEX™ -FS
- Sigma® PTFE
- Flange Rescue Gaskets (FRG)
- Spiral Wound Gaskets
- Kammprofile Gaskets
- Ring Type Joints
- Sheet Jointing
- Cut Gaskets
- Solid Metallic Gaskets
- Compression Packings
- Velocity Washer™
- Academy of Joint Integrity – Training and Integrity Services

For more information on our range of product and services please visit www.flexitallic.com or email

Flexitallic LLC

Email. sales@flexitallic.ae

Flexitallic Gaskets Company LLC

Email. sales-ad@flexitallic.ae





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About The Flexitallic Group

The Flexitallic Group is a global leader in specialised sealing solutions and products serving the oil and gas, power generation, chemical and petrochemical industries in emerging and developed markets. Focused on the upstream, downstream and power generation sectors, it has operations in France, the United States, Canada, Mexico, the United Kingdom, Germany, Italy, Belgium, the United Arab Emirates, Thailand, Australia and China plus a network of worldwide licensing partners and distributors.