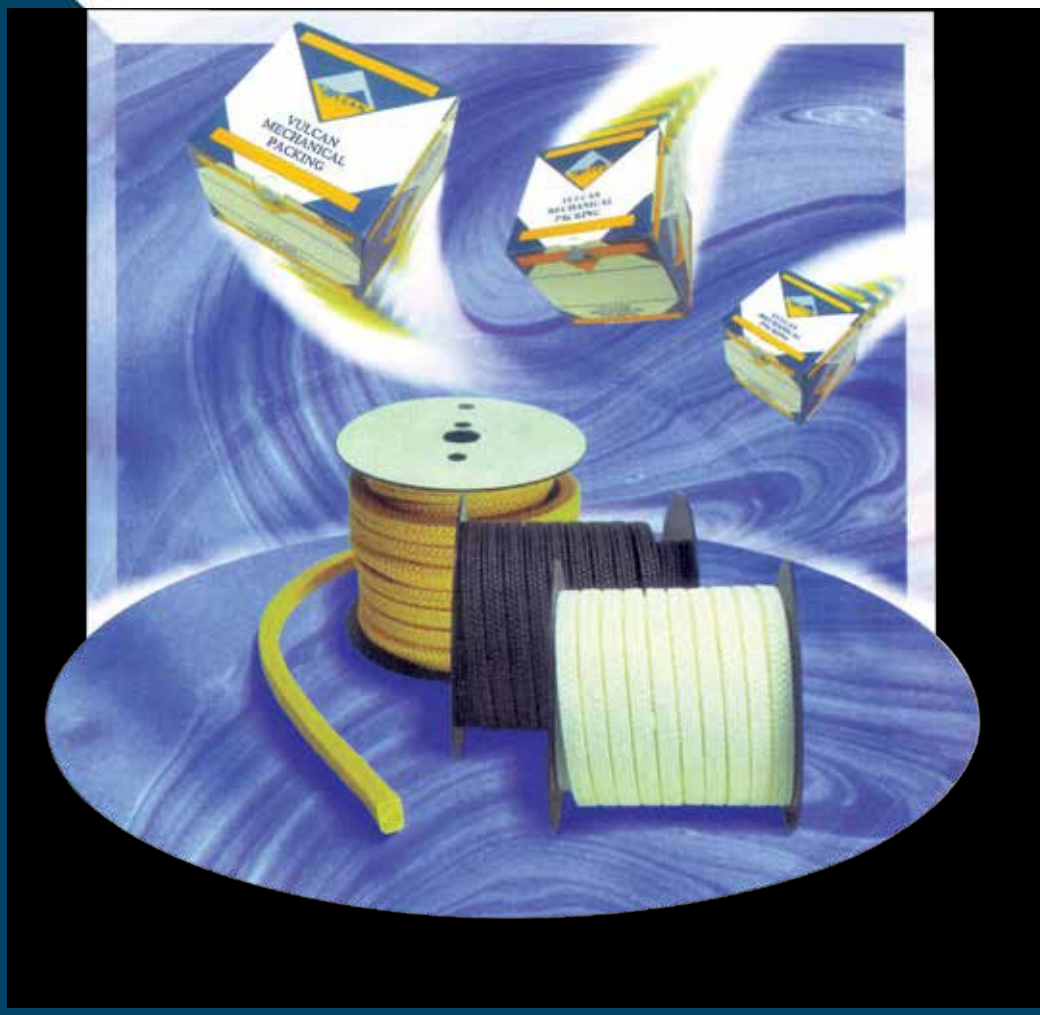
VULCAN®
GLAND PACKING

VULCAN



Embrace Excellence - Vulcan Service, Quality and Value

VULCAN MEANS SErVICE, QUALITY ProDUCTS AND rELIABILITY ASSUrED

The Vulcan Engineering Group

Manufacturing and service centres located within Asia, UK and the USA.

More than 20% p.a. growth for over 30 years.

Exceptional growth that results from an outstanding industry-leading product range, as well as quality, service and price.

Vulcan focuses on being not only a supplier but also a partner to our distributors, constantly surpassing their expectations with our total service ethos.

Vulcan Quality

Assured excellence in quality standards and reliability throughout every part of our business is an ethos that is paramount to us.

Reliability is assured through in-house design, automated manufacture, inspection and logistics, as well as constant innovation.

Unique distributor-specific Web Portal for live stock information and online ordering with 24/7 access.

Unbeatable stocks, product, service and prices.

The industry-leading advantages that Vulcan offers can assist you to further improve your own service, profitability and sales growth.

Unbeatable Competitive Prices

The scale of our operation allows us to offer the most competitive prices on our Gland Packing. We guarantee to offer and provide real savings over your existing prices.

Stock Range

Vulcan holds extensive stocks of 20 different Gland Packing styles to cover all applications, in all standard sizes and lengths. Non-standard styles and sizes, scarf cut and die-formed rings are also available and are manufactured to order.

Guaranteed Ex-Stock Supply

The size of our stock means we can guarantee the supply of our 20 styles, in all standard sizes and lengths, for next-day dispatch.

Advanced Manufacturing Facilities

Computer controlled machinery and electronic systems in our main facility, with over 400 employees and 17,000 square meters (180,000 square feet) of floor space, provide automated manufacture and control of our complex range and requirements.

Superior Material Quality and Design Policy

Our policy is to manufacture and supply the best quality in materials. We do not believe in lowering the quality of materials for economic reasons in our Gland Packing. We see that as false economy and have set precise industry standards of materials, design and production quality.

Superior Cross-Lock Design

With thorough impregnation and lubrication of the fibres, Vulcan Gland Packing styles are produced to the highest specification, yet are available at exceedingly competitive prices.

Distributor-Led Marketing

Our policy is to sell through distribution and to offer the best support facilities and loyalties to our partner distributors. We are deliberately different. This distributor-led policy is a complete contrast to industry norms. We totally support our distributors, helping them to market the product how and where they see fit, and look to react positively to all of their requirements. We support this philosophy with the best brochures, electronic media, sample cases and customer service in the business.

Added-Value Service and Profitability For You

Such are the advantages that Vulcan offers. We are dedicated to our ex-stock guarantee, same-day service across all of our four main product ranges, as well as the assured support, savings and sales advantages we provide to our partner distributors.

Quality is Paramount

Extremely extensive electronic quality systems, documentation and advanced inspection machinery ensure that a Vulcan Seal means quality and reliability assured.

Electronic Logistics

Our fully automated and electronically systemised supply logistics provide reliable and fast supply of our barcoded products.

Web Portal

Using your unique Web Portal account, you have 24/7 online access to detailed technical product information, stock levels and availability, your discounted prices, as well as the ability to place enquiries and orders at any time.

CoMMITTED To EXCELLENCE

Vulcan Seals Inc.

First of three planned service centres in North America.

Service facility with extensive stocks.

Extends Vulcan's ex-stock guarantee to the North American market.

Global Service

Manufacturing and stock-holding on three continents.

Partner distributors in over 90 countries provide local service and technical support.

Electronic Logistics

Industry-leading automated logistics and service.

Unique distributor-specific online Web Portal.

Unbeatable stocks, product, service and prices.

Vulcan Engineering Ltd - Sheffield UK

Main technical, commercial and service hub.

Over one million stock combinations available for same-day dispatch.

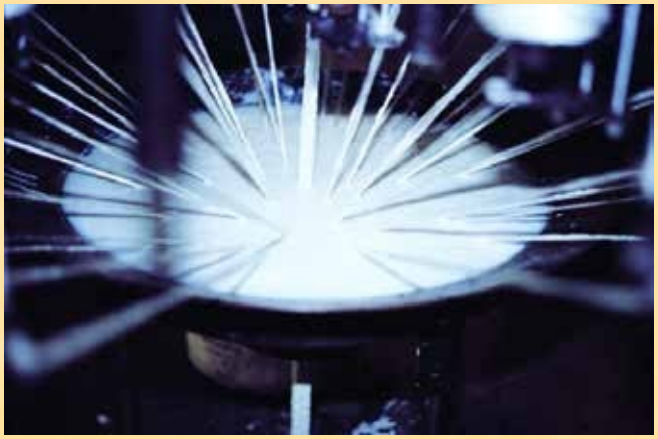
We provide exceptional distributor support through excellence in every aspect of our long-term partnerships.

VULCAN GLAND PACKING

Vulcan offer an extensive range of Gland Packing designed and constructed to minimise maintenance costs. Our philosophy is to offer the most suitable packing for each application from the wide selection available, using the most advanced packing fibres, the highest quality braiding methods and the best lubrication processes.

The actual cost of a Gland Packing is often less than 3% of the cost of utilisation when compared to the total cost of plant downtime, equipment wear, product or fluid loss, labour and gland maintenance.

It is therefore of paramount importance when specifying a Gland Packing to choose from the best modern packing fibres available, using the most advanced and durable, square inter-braided construction. Combining this quality with extensive stock holdings and experienced technical advice, completes the Vulcan Gland Packing service.



PACKING CoNSTrUCTIoN

All square-braided Vulcan Gland Packing is made from the advanced specification braiding machines available. 24 and braiders are used to produce 4-ply, square inter-braided pa sizes from 3/8” (10mm) upwards.

Fibres are run from the core of the packing section to the c posts and surfaces, whilst being cross-locked in a square, l construction, to produce maximum resilience and highly de packing.

Braiding quality significantly affects the working lifetime of Packing. Packing produced using outdated braiding machin the strength of a true cross-lock construction, are less dens not as square in cross section. The looser the braiding, the the packing’s durability. Additionally, greater gland pressur required to perform a seal, resulting in increased mechanic As the packing deteriorates, more frequent gland adjustme required, causing even more mechanical stress, which lead accelerated failure.

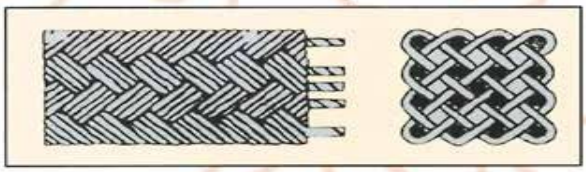
Vulcan Gland Packing have a high degree of resilience and of volume. Their superior lattice, square inter-braided const needs less gland pressure to seal, resulting in reduced equ wear, less gland maintenance and increased packing life.

2 Diagonals

Section 1/8” x 1/8” 8 Spindles
Section 3/16” x 3/16” 8 Spindles

3 Diagonals

Section 1/4” x 1/4” 12 Spindles
Section 5/16” x 5/16” 15 Spindles



4 Diagonals

Section 3/8” x 3/8” 24 Spindles
Section 7/16” x 7/16” 24 Spindles
Section 1/2” x 1/2” 24 Spindles
Section 9/16” x 9/16” 24 Spindles
Section Over 5/8” x 5/8” 36 Spindles

Stock Service

Vulcan keep a comprehensive range of packing types and stock, listed in both imperial and metric sizes.

American stocks are held in boxes by weight:

1 lb boxes in sizes 1/8” (3.2mm) and 3/16” (5mm)
2 lb boxes in sizes 1/4” (6.5mm) to 3/8” (9.5mm)
5 lb boxes in sizes 7/16” (11mm) to 5/8” (16mm)
10 lb boxes in sizes 3/4” (19mm) to 1” (25mm)

International stocks are held in boxes by length:

1/8” and 3/16” = 30 meters
1/4” and above = 8 meters

Vulcan have distributors in over 90 countries. Globally, if any size of packing is out of stock in a box by weight (or length) we will replace with a box by length (or weight) at the same price. We can supply any size of packing or box to your requirements, subject to production capacity.

Important Notice

All information in this brochure is given in good faith but without warranty, and is based on our financial evaluations, experience and published technical data.

As such, the service capabilities shown are for guidance only. Particularly, they should not be used in conjunction with maximums in any application, as service and equipment conditions greatly affect product capability and performance.

The purchaser should thoroughly test any application and independently conclude satisfactory performance of the product for its intended use.

Pan Fibre Packing

ServIce cApAbIIItIeS			
pressure rating	1,450 psi	rotary Speed	3500 fpm
temperature	-40˚F +500˚F	pH range	2-14

Type VT2

Product Information

Vulcan VT2 is braided from pure Poly Acrylic Nitrile (PAN) fibres which are the basis of the outstanding capabilities and performance of our PAN fibre packing. To maximise the performance of this remarkable synthetic fibre, VT2 is thoroughly impregnated, yarn by yarn, with heavy PTFE dispersion and further treated with special lubricants. Type VT2 has been specially designed to replace traditional packing, giving enhanced performance without the shaft wear problems or the elevated costs of other synthetic fibres.

VT2 is a true, high specification, process industry packing. The combination of an exceptional packing fibre with advanced lubrication, gives a clean, smooth running packing, for extended life even at high shaft speeds and pressures within a wide pH and temperature range.

Applications

Wide variety of process plant including pumps, valves, mixers, reactor vessels and reciprocating applications. Against general chemicals, solvents, oils, water and steam. A wide ranging packing, for use in arduous in the process applications, especially where alternative packing contaminates, causes excessive wear or requires frequent maintenance and replacement. VT2 does not contaminate nor stain, making it particularly suitable for use in the food, water and paper industries.

ServIce cApAbIIItIeS			
pressure rating	1,160 psi	rotary Speed	2000 fpm
temperature	-60˚F +482˚F	pH range	4-12

Type VG2

Product Information

Type VG2 is constructed using a composite yarn manufactured from high-quality PAN fibres combination with pure Carbon fibres. The in-built lubrication and superior packing fibre properties of this composite yarn are further enhanced by a thorough graphite impregnation and high temperature lubricants.

Vulcan VG2 is a soft, comfortable packing, with a square, inter-braided, lattice construction, which creates improved sealing contact with less gland pressure. The self-lubricating PAN fibre, reinforced with Carbon and heavily coated and impregnated with graphite lubricants, practically eliminates shaft scoring. VG2 gives extended packing life, with reduced shaft wear and gland maintenance.

Applications

Vulcan Type VG2 is an exceptional performance and cost effective general purpose packing suitable for most plant applications. Designed to replace and out-perform traditional Graphited Asbestos, glass fibre and Natural fibre packing. Suitable for use against oils, water, steam, solvents and general chemicals.

ServIce cApAbIIItIeS			
pressure rating	Application Dependent	rotary Speed	Static Only
temperature	-40˚F +482˚F	pH range	1-14

Type VT6 - Tank Lid Packing

Product Information

Vulcan VT6 is a static use variant of our Type VT2 which has been specifically designed and produced for Man-Lids on Tanks. VT6 is dense, square inter-braided from P.A.N. fibres that are thoroughly impregnated with PTFE. Dispersion.

Increasing environmental awareness and legislation make consideration of the material, braid quality and performance of Tank Lid packing of paramount importance. Vulcan VT6 is widely used in the static and road tank industry as the quality example of a braided tank packing.

For the increased resilience of a rubber core, combined with the chemical resistance of PTFE., Vulcan offer our FEP Encapsulated Silicone Rubber Tank Lid Seals. In a variety of sizes to suit all common Tank Lids and cross sections to customer preference.

Vulcan VT6 is available in all standard road tank sizes, as are the above Encapsulated Seals.

Applications

Man-Lids, Tank Covers and Hatches against all chemicals that are compatible with PTFE.

glass Fibre Packing

ServIce cApAblIltIeS			
pressure rating	2,175 psi	rotary Speed	2500 fpm
temperature	-40˚F +530˚F	pH range	2 -12

Type VG8L / VG8D

Product Information

Vulcan VG8L is inter-braided from continuous filament, textured, air-blown glass yarns. The glass fibres are heavily lubricated and thoroughly impregnated with PTFE dispersion and an inert lubrication, both prior to and subsequent to braiding.

Vulcan VG8L can replace traditional packing in general, non-arduous duties, whilst being of superior square inter-braid construction. Consider that Type VG8L's air-blown glass fibres are kinder to the shaft and you have a naturally square packing that will seal with less gland pressure, significantly reduce shaft wear and gland adjustment and thus increase packing life in light duties.

Applications

Type VG8L is a smooth, cool running packing for a wide variety of uses in a plant. Particularly useful on water and mildly abrasive slurries, solvents and chemicals in reciprocating and centrifugal pumps, mixers and valves.

Vulcan's alternative Type VG8D is the same packing but the inert lubricants are replaced by an increased PTFE dispersion. VG8D is designed as a valve packing that is also suitable for a variety of static or slow moving applications up to 800 fpm (4 m/s).

ServIce cApAblIltIeS			
pressure rating	3,625 psi	rotary Speed	200 fpm
temperature	-150˚F + 1000˚F	pH range	4 -11

Type VG1D

Product Information

Vulcan Type VG1D is square braided from continuous filament, texturised glass fibres reinforced with Inconel wire and impregnated yarn by yarn with pure Graphite powder and a corrosion inhibitor.

Type VG1D Graphited Glass packing is designed as a substitute to classic Asbestos packing with high temperature capability. The addition of Inconel wire reinforcement results in a true high pressure and high temperature traditional valve packing that has the advantage of being non-asbestos.

Applications

General purpose, non-asbestos valve packing against steam, water, oils, air, alkali, mild acids and chemicals. Not suitable for very arduous conditions.

ServIce cApAblIltIeS			
pressure rating	2,175 psi	rotary Speed	2000 fpm
temperature	-150˚F + 900˚F	pH range	4 - 11

Type VG1L

Product Information

Vulcan VG1L is an alternative packing for light duties. VG1L is inter-braided from continuous filament, textured air-blown glass fibres thoroughly impregnated with mineral oil lubricants and graphite. A dressing and corrosion inhibitor is further applied to the yarn to improve wear resistance.

Type VG1L will handle non-mechanically demanding Plant Applications whilst requiring low gland pressure to seal thus reducing shaft wear and gland maintenance.

Specify Type VG1L for general plant service, at elevated temperatures, only if Carbon or Graphite fibres are not required. Glass fibres offer exceptional temperature resistance but are relatively low strength. Up to 480°F (250°C), use Vulcan VG2 for superior performance or Type VK1L where higher mechanical load or very abrasive conditions exist. At higher temperatures, Types VC5 or VG4 are preferred.

Applications

General purpose packing for rotary and reciprocating pumps, mixers and valves against steam, water, oils, air, alkalis, mild acids and chemicals.

kevlar ® aramiD Fibres

ServIce cApAbIlItIeS			
pressure rating	5,800 psi	rotary Speed	3000 fpm

Type VK4B

Product Information

Vulcan VK4B is an interlace, square braid packing manufactured from KEVLAR® Aramid fibres impregnated with PTFE dispersion and specially treated with high temperature break-in-lubricant. KEVLAR® offers a unique combination of extremely high tensile strength, lasting resilience, low thermal expansion, low coefficient of friction and wide chemical resistance.

Vulcan VK4B KEVLAR® gold fibre packing is a true multi-service packing that is well suited to the needs of many industries, particularly where physical strength in a packing is required. The strength of KEVLAR® is ideal for use as anti-extrusion, abrasion resistant, back-up rings, with other packing types, to increase the life of any packing combination.

Applications

For pumps (rotary and reciprocating) and valves, including high pressure or high mechanical loading conditions, against abrasive slurries, sewage, effluents, water, oils, solvents and most chemicals.

The non-staining superior lubrication of Vulcan VK4B means less wear and a higher shaft speed capability than some other KEVLAR® packing types.

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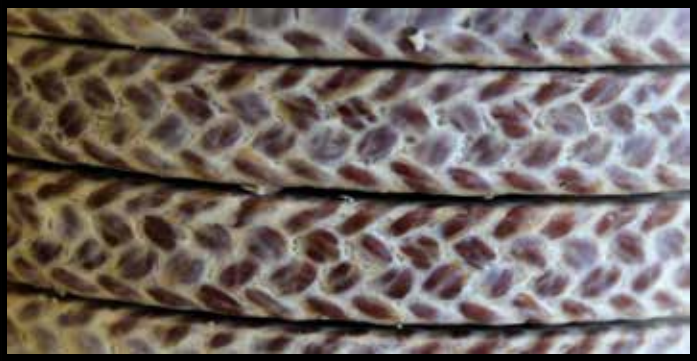

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VC1

Information

C1 is a Superior performance pump packing. Made of a unique composite fibre. This special fibre combines an exceptionally high ength 380,000psi (27,000 kg/cm²), outstanding heat resistance, ow friction and excellent cool running properties. Lacking the f conventional synthetics and, thus, readily conforms to stuffing ces, is easy to install and requires minimal gland torque and fewer nts.

trong thermoset fibre packing but it is also extremely soft, y our exclusive, three stage lubrication process. The low-friction uces abrasion by up to 1/10th compared to Aramidic fibres, reliability and life, even in the most demanding of applications. at resistant and will not glaze, even at high shaft speeds.

ions

ervice pumps Paper-Mill, Sugar-Mill and demanding application Easy to cut and install, fast to break-in, kind to shafts, non- nd with low susceptibility to adverse conditions, at installation

ServIce cApAbIlItIeS			
pressure rating	2,175 psi	rotary Speed	4000 fpm
temperature	-150˚F + 536˚F	pH range	1-13

VK4

Product Information

Vulcan VK4 is manufactured from KEVLAR® Aramid fibres. In order to get maximum benefit from this material, VK4 is specially treated with a high concentration of resilient, food quality lubricants and heavy PTFE dispersion. The resulting packing significantly reduces the shaft wear problems which have sometimes been associated with other KEVLAR® packing and, with this increased lubrication, higher shaft speeds of up to 4000 fpm (20m/s) can be handled. VK4, KEVLAR® Aramid fibre lube packing, is a durable, economic general service packing for 80% of plant needs. The strength of fibre and construction of Vulcan VK4 leads to long packing life with extended periods between necessary gland adjustments.

Applications

For rotary and reciprocating pumps, stern glands, hydraulic presses, mixers and valves against abrasive slurries, sewage, effluents, water, oils, solvents and all bar the most aggressive chemicals.

Non-staining lubrication and resilient performance make Vulcan VK4 ideal for use in the paper industry.

aramiD Packing

ServIce cApAbIlItIeS			
pressure rating	1,885 psi	rotary Speed	4000 fpm
temperature	-150˚F + 480˚F	pH range	2 - 12

Types VM1 / VM5

Product Information

Vulcan VM1 is a universal Paper-Mill and Sugar-Mill packing, made of a unique Aramidic composite fibre. This special fibre combines an exceptionally high tensile strength 380,000 psi (27,000 kg/cm²), outstanding heat resistance, linked to low friction and excellent cool running properties.

This is a strong Thermoset fibre packing but it is also extremely soft, assisted by our exclusive, three-stage, lubrication process. The low-friction factor reduces abrasion to up to 1/10 compared to Aramidic fibres, giving high reliability and life, even in the most demanding of applications. VM1 is heat resistant and will not glaze, like usual Paper Mill & PTFE packing, even at high shaft speeds.

Type VM5 is a very similar product in more economical form. It will provide the same service but care must be taken not to over-tighten the gland nor starve the packing of product or flush lubrication.

Applications

Universal Paper-Mill, Sugar-Mill and demanding application packing, that is white non-staining, with excellent chemical resistance and is suitable for Kraft processes. Easy to cut and install, fast to break-in and with low susceptibility to adverse conditions, at installation or in-use.

ServIce cApAbIlItIeS			
pressure rating	vK1l - 2,900 psi vK1D - 5,800 psi	rotary Speed	vK1l - 2400 fpm vK1D - 200 fpm
temperature	-150˚F + 570˚F	pH range	1 - 13

Types VK1L / VK1D

Product Information

Vulcan Type VK1L has been designed to replace and outlast traditional packing, particularly in abrasive media and high pressure rotary applications. VK1L is a square-braided packing made from KEVLAR ® Aramid fibres thoroughly impregnated with pure Graphite powder and inert lubricant. The performance of the packing is further enhanced with corrosion inhibitors and Molybdenum Disulfide lubricant.

Vulcan Style VK1D in inter-braided from KEVLAR® Aramid fibres further reinforced with Inconel wire and impregnated with pure graphite and a corrosion inhibitor.

Applications

VK1L is a general purpose, wide-ranging, durable arduous duty packing. For use in rotary, reciprocating and static applications particularly against abrasive fluids, weak chemicals and water.

Vulcan VK1D is a high strength valve packing also suitable for plunger pumps, turbines and static seals. Particularly for use against oils, air, water, hot steam and asphalt.

ServIce cApAbIlItIeS			
pressure rating	3,625 psi	rotary Speed	vK5 5000 fpm vK4t 3000 fpm
temperature	vK5 -240˚F + 530˚F vK4t -150˚F + 550˚F	pH range	0 - 14

Types VK5 / VK4T

Product Information

Vulcan Types VK5 and VK4T combine the benefits of the remarkable properties of two outstanding Gland Packing fibres, G1 has the best combination of features of any packing fibre but it may extrude or deteriorate in high mechanical loading conditions. The addition of DuPont's KEVLAR® has steel-like strength. VK5 G1 KEVLAR® combi-packing is square inter-braided to add the strength of KEVLAR® where it is most needed on the corner posts for dimensional stability and to resist extrusion. The G1 yarns are braided to the packing surfaces to enhance smooth running and sealing capability.

VK4T follows the same principles and benefits but utilises PTFE fibres rather than G1. Vulcan VK5 is THE packing for extended life in high pressure or mechanical load conditions, particularly on worn or large tolerance equipment and in the most demanding chemical environments. Shaft wear is virtually eliminated, and high speeds and aggressive chemicals can be handled, because of the presence of G1 on sealing faces. Extrusion and gland maintenance is negligible, even in the most arduous of applications, due to the inter-locked braiding of KEVLAR®

Applications

Types VK5 and VK4T combine mechanical strength with surface lubricity to give a long lasting, high performance sealing, near universal packing, for use in all rotary, reciprocating and static gland applications.

PTFe Packing

ServIce cApAbIlItIeS			
pressure rating	2,900 psi	rotary Speed	1200 fpm
temperature	-325˚F +530˚F	pH range	0 - 14

Type VT9D

Product Information

Vulcan VT9D is solely manufactured from pure PTFE in the form of fine multi-filament yarns. The PTFE yarns are further vacuum impregnated with PTFE dispersion to enable the packing to handle steam and gas services as well as liquids. This PTFE packing offers exceptional chemical resistance along with high strength and low coefficient of friction. The inter-braid construction and the fact that VT9D will not harden in service over many years of usage, ensures that

As a packing seal, VT9D is far superior to machined or molded PTFE rings in that its tensile strength is 20 times higher, but at a fraction of the cost. VT9D has a tensile strength of up to 50,000 PSI (3,500kg/cm²).

Guarantee

Vulcan VT9D, properly fitted, is guaranteed to last the life of the valve into which it is packed. Should the packing fail it will be replaced free of charge.

Applications

For low speed pumps, mixers, reciprocating rods and valves against up to the strongest chemicals, solvents and steam. Exceptions are molten and alkaline metals and fluorine.

ServIce cApAbIlItIeS			
pressure rating	1,740 psi	rotary Speed	2500 fpm
temperature	-40˚F +530˚F	pH range	0 - 14

Type VT9L

Product Information

Vulcan Type VT9L is braided from pure PTFE fibres, in the form of multi-filament yarns, vacuum impregnated with PTFE dispersion and saturated with chemically resistant lubricants. The PTFE fibres are pre-shrunk and square inter-braided to produce a dimensionally stable packing.

Type VT9L chemical pump packing exhibits high mechanical strength and high operational stability under demanding operation conditions, in addition to excellent non-friction characteristics.

Shaft wear is virtually eliminated and Vulcan VT9L is capable of performing in service conditions far beyond conventional packing.

Applications

The enhanced lubrication and multi-filament yarn treatment of Vulcan VT9L allows greatly extended service capability in pumps up to 12/m² surface shaft speed. For use against solvents and virtually all chemicals with the exceptions of molten and alkaline metals and fluorine.

Specify VT9L to replace VT9D in higher speed, or in the most corrosive duties.

ServIce cApAbIlItIeS			
pressure rating	1,740 psi	rotary Speed	2500 fpm
temperature	-40˚F +530˚F	pH range	0 - 14

Type VT9S

Product Information

Vulcan Type VT9S is braided from pure PTFE fibres, in the form of multi-filament yarns, vacuum impregnated with PTFE dispersion and saturated with chemically resistant lubricants. VT9S is manufactured solely from FDA compliant materials and is thus especially suitable for industries and applications where such regulatory compliance packing is required. The PTFE fibres are pre-shrunk and square inter-braided to produce a dimensionally stable packing.

Type VT9S chemical pump packing exhibits high mechanical strength and high operational stability under demanding operation conditions, in addition to excellent non-friction characteristics.

Applications

Suitable for use in pump, valves, reciprocating and static applications in pharmaceutical, food and beverage industries. Specify VT9S to replace VT9L or VT9D.

PTFe graPhiTe Packing

ServIce cApAbIIItIeS			
pressure rating	1,740 psi	rotary Speed	5000 fpm
temperature	-325˚F +530˚F	pH range	0 - 14

Type VP1

Product Information

Vulcan VP1 is 100% GORE ® fibre packing. This remarkable yarn is constructed from PTFE and Graphite intimately blended and locked and then treated with a high temperature, break-in lubricant. Vulcan VP1 is an outstanding packing for use in aggressive or arduous duties including the most difficult chemical environments. It is essentially chemically inert over the entire pH range. The unique combination of locked Graphite and PTFE creates a yarn with very high thermal conductivity, that does not harden, shrink, swell nor dry out and that is exceptionally smooth running with negligible shaft wear. User experience with G1 fibre has shown that, in practically all cases, greatly extended service life can be expected.

In order to obtain maximum benefit from this fibre, Vulcan VP1 is square inter-braided via a CROSS-LOCK® process. The construction of VP1 increases the durability of the packing and reduces the gland pressure required to perform a seal. Periods between gland maintenance and packing replacement are thus even further extended and Type VP1's CROSS-LOCK® braiding helps overcome extrusion problems, which can be the one negative of this fibre, particularly in lower quality braids.

Applications

See below as per Style VP2.

ServIce cApAbIIItIeS			
pressure rating	1,740 psi	rotary Speed	5000 fpm
temperature	-325˚F +530˚F	pH range	0 - 14

Type VP2

Product Information

VP2 packing is manufactured solely from a unique Vulcan G1 fibre G1 developed to be very similar in material construction to the original GORE® fibre and has been manufactured to optimise performance at an improved cost. G1 yarn is constructed from PTFE tape and Graphite inter-locked to create a true synergy between these two premier packing materials. High temperature break-in and running lubricants are added to the yarns, prior to braiding in our CROSS-LOCK®. The result is an exceptional process packing that gives, often many times, longer service life in the vast majority of applications. With the exceptions of high mechanical load (highly abrasive media or high pressure) or temperatures above PTFE's limit of 536°F (280°C), Vulcan VP2 is the ultimate packing for general pump duties.

Vulcan VP2 resists all chemicals across the entire pH range (except oleum, aqua regia, fuming nitric acid and fluorine), is self lubricating and does not shrink, harden nor dry out. The packing is very cool running with exceptionally good thermal conductivity thus practically eliminating shaft scoring.

Applications

For use wherever the value of the best quality and material packing can be realised. Since the actual purchase cost of a packing is typically only 3% of the true utilisation cost, Vulcan recommend this PTFE GRAPHITE packing for all possible applications. They will increase service life whilst minimising wear and gland adjustments, against nearly all media in static, rotary and reciprocating uses.

ServIce cApAbIIItIeS			
pressure rating	2,175 psi	rotary Speed	200 fpm
temperature	-150˚F +500˚F	pH range	0 - 14

Type VT8

Product Information

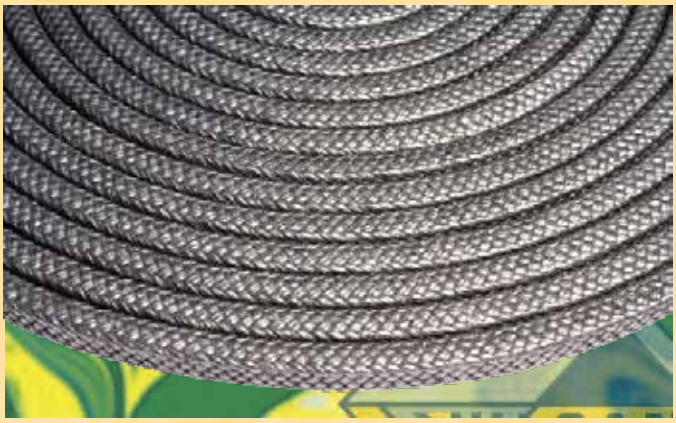
Vulcan Type VT8 is supplied as a double construction of a 100% unsintered PTFE core with a spiral covering of PTFE tape. VT8 provides the versatility of an extruded malleable core with the additional strength and extrusion resistance of the PTFE tape covering. The result is a low friction, extrusion resistant, TEFLON® packing with near universal chemical resistance.

VT8 will not harden nor shrink in application and provides an instant packing and instant gasket on one very economical spool. In valves, wrap VT8 round the stem to fill the gland (no need for cut rings), tighten the gland follower and the PTFE molds to form a tight leak free seal. A properly installed VT8 is guaranteed to last the life of the valve to which it is fitted.

Applications

Universal PTFE sealing material for gasketing and long-life valve packing. For practically all chemicals. Not suitable for liquid or gaseous oxygen.

carbon graPhiTe Fibres



ServIce cApAbIIItIeS			
pressure rating	4,350 psi	rotary Speed	4000 fpm
temperature	Up to 800˚F in oxidising environments Up to 5000˚F in inert environments	pH range	1 - 13

Type VG4

Product Information

Vulcan Type VG4 is a 100% pure Graphite packing which is capable of near universal application. VG4 is inter-braided from pure Graphite yarn impregnated fibre by fibre with pure Graphite powder. The Graphite powder increases the natural sealing effect of the Graphite yarns and acts as a surface lubricant top produce a virtually non-scoring packing.

Graphite fibre is superior to any other yarn in the degree to which it combines outstanding packing properties, namely; excellent thermal conduction, smooth running, near universal chemical resistance and extreme temperature capability. The use of Vulcan Type VG4 pure Graphite fibre packing provides opportunity to extend the use of the packed gland into extreme areas of speed, temperature and chemical resistance. In more normal applications, the quality of Type VG4 will result in maintenance savings many times in excess of the actual packing cost.

Applications

For pumps and valves in extreme conditions or where the value of the best quality packing can be realised. Universal chemical resistance (sole exceptions are fuming nitric acid, oleum, aqua regia and fluorine). Suitable and certified for use in nuclear power plants. Percentage of soluble chloride is less than 50ppm.

ServIce cApAbIIItIeS			
pressure rating	4,350 psi	rotary Speed	6000 fpm
temperature	-150˚F + 1200˚F Inert -150˚F + 850˚F air	pH range	0 - 14

Type Vr4

Product Information

Vulcan Type VR4 combines and maximizes the performance of Expanded Graphite and Graphite fibres. Expanded Graphite is the ultimate valve sealing material, but it may extrude or deteriorate, in more mechanically demanding, rotary applications. The addition of Pan Graphite fibres adds strength and increases heat dissipation, which further enhances the packing's life and performance.

VR4 is square inter-braided, with the Pan Graphite fibres running from core to the corner posts, to give dimensional stability and to resist extrusion. The Expanded Graphite fibres are braided to the packing surfaces, to enhance smooth running and sealing performance.

Vulcan VR4 is THE Expanded Graphite packing for use in rotary applications. Shaft wear and gland maintenance are virtually eliminated, as the packing is self-lubricating and includes, passive, corrosion inhibitors.

Applications

Maximum capability, rotary Gland Packing, for an extreme range of duties, against virtually all chemicals and temperature conditions.

ServIce cApAbIIItIeS			
pressure rating	vc5 2,900 psi vc51 5,075 psi	rotary Speed	vc5 3000 fpm vc51 200 fpm
temperature	-250˚F +650˚F	pH range	3 - 12

Types VC5 / VC51

Product Information

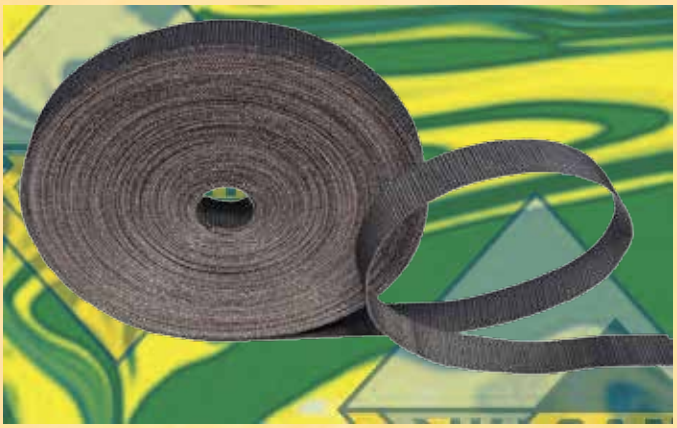
The Vulcan VC5 is square-braided from high quality Carbon yarns impregnated with pure Graphite, special high temperature lubricants and Molybdenum Disulf The Carbon yarns are dense braided to provide a near frictionless, self-lubricati seal. Graphite powder provides non-migrating lubrication between the packing a the shaft. The non-glazing, high temperature lubricant protects during the packi break-in period. The addition of Molybdenum Disulfide gives high temperature a high pressure lubrication with shaft wear protection even when contact pressure between packing and shaft are excessive.

The VC5 Carbon fibre packing is swift to break-in because of its low friction lub intensive constituents and these characteristics allow for its extended life in ard duties. Vulcan Type VC5 can be used in services where many other lubricated fibre packing types fail, due to migration or loss of lubrication and consequent fibre burning, hardening or glazing. Type VC51 is reinforced with Inconel wire fo high pressure static applications up to 5,075 psi (350 bar) to give an exceptiona capability, performance and lasting valve packing for use up to 200 fpm (1m/s)

Applications

VC5 is ideal as a rotary duty, multi-service packing particularly for boiler feed applications.

exPanDeD graPhiTe Packing



ServIce cApAbIIIteS			
pressure rating	2,900 psi	rotary Speed	200 fpm
temperature	Inert -320˚F +5500˚F Air -320˚F +1100˚F	pH range	0 - 14

Types Vr1

Product Information

Vulcan Grafan material is essentially pure carbon in Graphite form processed into flexible foil material without any fillers, binders or other additives. The product is self-lubricating, dimensionally stable, impervious to gases and fluids, and shows exceptional temperature and chemical resistance. Grafan offers unrivaled sealing capabilities under extreme temperature, media and pressure conditions giving extended packing life.

Graphite in this form is self-lubricating with a low coefficient of friction (comparable to Teflon), high thermal conductivity and permanent volumetric elasticity (spring back) which results in no volume reduction (compression set) in use. Resilient with ideal fluid and gas sealing characteristics and extreme capabilities, Grafan offers the ultimate range and performance in a packing material.

Vulcan Type VR1 is a crimped Grafan ribbon Tape, available from 6mm to 75mm wide, for in-situ packing of valve stems and then it is easily compressed into a uniform packing ring. Using this system, a small tape inventory can pack any size of gland with superior service results.

Applications

As below, but for static use only.

ServIce cApAbIIIteS			
pressure rating	2,900 psi	rotary Speed	6000 fpm
temperature	Inert -300˚F +5500˚F Air -300˚F +1100˚F	pH range	0 - 14

Type Vr2

Product Information

Type VR2 Die-Formed are produced by compressing an exact amount of Grafan Ribbon Tape in precision metal molds. The result gives uniform quality, dense, smooth finished, close tolerance, die-formed rings.

A large range of Grafan rings are available ex-stock. Any custom size or shape can be produced, usually from existing tooling with a range of densities available from 0.578 to 0.0723 oz/cu in (1 to 1/8 g/cm³). VR2 die-formed rings are supplied just to size for ease of fitting. When energised in the gland, the rings compress to effect a perfect leak-free seal on valves. It is well proven that valves packed with these materials have been in service for years, leak free without maintenance, where previous braided packing have failed within weeks or months.

Applications

Extreme condition, long life and zero leakage packing for all uses, up to high temperature, high pressure, high speed applications on pumps, valves, mixers, agitators, expansion joints, ball valve seats and other static seals. Types VR1 and VR31 are designed for use in static applications only. Against all acids, alkalis and solvents (except very strong oxidants), gases, feed water and superheated, or saturated steam.

ServIce cApAbIIIteS			
pressure rating	vr3 2,900 psi vr31 5,220 psi	rotary Speed	vr3 6000 fpm vr31 200 fpm
temperature	vr3 -300˚F + 5500˚F vr31 -300˚F + 1100˚F	pH range	0-14

Types Vr3 / Vr31

Product Information

Vulcan Types VR3 and VR31 are braided packing, constructed from 100% Grafan yarns, to form a truly exceptional capabilities and performance, pure Expanded Graphite packing. Type VR31 is additionally reinforced with Inconel wire to create the ideal packing for high temperatures, high pressure valves.

Under compression in the gland, Types VR3/VR31 die-form into packing rings like VR2, whilst offering the advantage of avoiding the need to laboriously wrap VR1 ribbon tape around valve stems or the cost of an inventory of many sizes of individual VR2 die-formed rings.

Types VR3 / VR31 can be merely cut to length and spiraled into the gland. There is no need for individual cut rings, as is the case with conventional braided packing. Grafan is self-lubricating and will not shrink nor harden nor dry out in use.

Applications

Extreme condition, long life and zero leakage packing for all uses, up to high temperature, high pressure, high speed applications on pumps, valves, mixers, agitators, expansion joints, ball valve seats and other static seals. Types VR1 and VR31 are designed for use in static applications only. Against all acids, alkalis and solvents (except very strong oxidants), gases, feed water and superheated, or saturated steam.

naTUral Fibres

ServIce cApAbIIItIeS			
pressure rating	1,450 psi	rotary Speed	2500 fpm
temperature	-20˚F + 250˚F	pH range	4 - 12

Type VC6

Product Information

This packing is made from twisted Cotton yarns thoroughly impregnated, during and after braiding, with PTFE dispersion and special inert lubricants. The addition of PTFE dispersion widens the chemical resistance of VC6 compared to standard graphite or plain cotton packing. The special lubricants ease fibre to metal contact and embody very high lubricating properties, tenaciously adhering to metal shafts.

Vulcan Type VC6 is a soft, strong and absorbent cotton packing that prevents shaft wear because the cotton constantly absorbs the liquid being pumped along with any abrasive media. VC6 provides high flexibility with a very low co-efficient of friction and maintains a soft, moist pliable running face to the shaft.

Applications

The special lubrication of Type VC6 is sea-water and slurry resistant. VC6 can be used for sealing stern glands, pumps and valves against water, sewage, solvents, oils, fats and abrasive solutions.

ServIce cApAbIIItIeS			
pressure rating	1,450 psi	rotary Speed	2500 fpm
temperature	-20˚F + 250˚F	pH range	2 - 12

Type VT5

Product Information

Vulcan Type VT5 is an outstanding PTFE impregnated and lubricated packing, made to replace traditional PTFE asbestos packing, without sacrificing the strength and natural sealing qualities of Asbestos. Asbestos replacement packing normally has a payoff in terms of capabilities of the fibre used, or in terms of cost. VT5 is a low cost, quality packing giving outstanding service life. Vulcan VT5 is braided from natural Ramie fibres which are extremely strong and therefore highly resistant to wear and to rotting. A long term PTFE impregnation is bound to each yarn in a special process and the packing is further treated with inert lubricants.

VT5 PTFE Ramie fibre packing is especially suitable for aqueous mixtures containing abrasive media such as found in the water, sewage, paper and marine industries. VT5 is non-staining and smooth running to give a high level of shaft protection. This packing is characterised by its long service life with high mechanical strength and excellent volumetric stability.

Applications

Multi-purposes pump and valve packing for exceptional trouble-free service life against general and abrasive media. For use in the water, marine, brewing, food, chemical, petrochemical and paper industries.

ServIce cApAbIIItIeS			
pressure rating	1,885 psi	rotary Speed	2000 fpm
temperature	-20˚F + 250˚F	pH range	2 - 12

Type VF4

Product Information

VF4 is braided from selected, long fibre, heavy duty, flax yarns thoroughly impregnated yarn by yarn with PTFE and treated with break-in lubricants. The packing is designed to give a very low coefficient of friction, resistance to wear and rotting, good compressibility, high flexibility, high tensile strength and comparative ease of installation and take-up especially on large cross-sections.

Vulcan VF4 PTFE Flax packing is especially designed to seal large cross-sectional areas and is ideal to solve the exacting sealing requirements of stern glands in the marine field. The packing will also be of superior service in heavy reciprocating machinery, rotary applications handling abrasive media and heavy duty static applications such as tank lid seals.

Applications

For use in the paper, marine, chemical , pharmaceutical, sugar and water industries against salt water, slurries, hydrocarbons, oils, greases and solvents.

naTUral Fibres

ServIce cApAblIltIeS			
pressure rating	725 psi	rotary Speed	1500 fpm
temperature	-4˚F + 250˚F	pH range	5 - 9

Type VF225

Product Information

Vulcan type VF225 is square-braided from long, heavy duty natural fibre yarns. These high-strength yarns are thoroughly impregnated, before and after braiding, with a specially blended lubricant.

The packing is designed to give a very low coefficient of friction, resistance to wear and rotting, good compressibility, high flexibility, high tensile strength and ease of installation.

VF225 is an excellent, general purpose packing especially for water duties. Its resilience, low shaft wear, ease of fitting and economic cost makes Vulcan VF225 an effective choice for many standard applications.

Applications

Type VF225 is suitable for all general water-based applications in pumps and valves, up to 248°F (120°C).

ServIce cApAblIltIeS			
pressure rating	725 psi	rotary Speed	1500 fpm
temperature	-4˚F + 250˚F	pH range	4 - 10

Type VGC 206

Product Information

Vulcan VGC 206 is a densely braided, cotton packing impregnated with a blend of mineral lubricants and graphite. Special lubricants are added to the fibres during and after braiding. These preparations produce a thorough lubrication that will not readily migrate, leading to minimal shaft friction and wear and extended packing life.

Vulcan VGC 206 lubricated Graphited Cotton is a quality sample of a traditional water pump packing. VGC 206 is designed to give a low-cost, good packing life in general fluid handling services.

Applications

Dynamic applications handling water, oil and ammonia products. General purpose pump and valve packing for water duties.

Flexible Packing Extractors

Product Information

These flexible extractors are designed to facilitate the removal of old packing of any size. The long flexible shank of the extractors makes access easy, even to those glands in the most awkward positions. The hardened and tempered steel screw end is designed to give maximum penetration into the packing.

The Extractors are supplied in four sizes, as follows:

SIZE 1 for 1/8” (3.2mm), 3/16” (5mm) and 1/4” (6.5mm) packing.

SIZE 2 for 5/16” (8mm) and 3/8” (9.5mm) packing.

SIZE 3 for 7/16” (11mm) and 1/2” (12.5mm), 9/16” (14.5mm) and 5/8” (16mm) packing.

SIZE 4 for 3/4” (19mm) packing and upward.

Extractors may be ordered in any quantity of individual size or in boxed sets comprising one each of the four sizes.

The pattern ”C” extractors have the corkscrew tip integral with the extractor while the pattern “R” has a replaceable tip. The preferred type should be specified when ordering.

Pr EFEr r ED r ANGE o F o PTIMUM PEr Fo r MANCE PACKING

= valves
= Pumps & mixers
= r eciprocating r ods
= stern Tubes

style	material Description	Temperature	egnar hp	Product Detail	best r ecommended applications are in r ed		
vP2	PTFE Graphite G1 fibre	-328°F +536°F	0-14	The Preferred, optimum cost / performance process & pump packing.	Pressure 435 psi Speed 5000 fpm	Pressure 870 psi Speed 400 fpm	Pressure 1,740 psi Speed 300 fpm
vP1	100% GORE® fibre packing	-328°F +536°F	0-14	Process & Chemical pump packing, 100% GORE® G1 fibre.	Pressure 435 psi Speed 5000 fpm	Pressure 870 psi Speed 400 fpm	Pressure 1,740 psi Speed 300 fpm
vT2	P.A.N fibres, PTFE Dispersion	-40°F +482°F	2-14	The Preferred, low cost, general plant pump packing.	Pressure 435 psi Speed 3500 fpm	Pressure 870 psi Speed 400 fpm	Pressure 1,450 psi Speed 300 fpm
vg2	P.A.N fibres, Graphite Dispersion	-58°F +482°F	4-12	Graphite lubricated, lowest cost, synthetic fibre, general plant pump packing.	Pressure 290 psi Speed 2000 fpm	Pressure 580 psi Speed 600 fpm	Pressure 1,160 psi Speed 200 fpm
vk4	Kevlar Aramid fibres, Heavy PTFE Lubrication	-150°F +536°F	1-13	Optimum cost, lower wear, Aramid pump packing for abrasive media / arduous duties.	Pressure 580 psi Speed 4000 fpm	Pressure 1,160 psi Speed 400 fpm	Pressure 2,175 psi Speed 300 fpm
vm1	Special Aramidic fibre, with PTFE	-150°F +482°F	2-12	Universal Paper / Sugar-Mill etc., white packing for demanding applications.	Pressure 725 psi Speed 4000 fpm	Pressure 1,160 psi Speed 400 fpm	Pressure 1,885 psi Speed 300 fpm
vk4b	Kevlar Aramid fibres, PTFE Lubrication	-150°F +536°F	1-13	Kevlar, Aramid fibre, pump packing, for the most abrasive media / arduous duties.	Pressure 725 psi Speed 3000 fpm	Pressure 1,450 psi Speed 600 fpm	NOT Recommended
vr4	Expanded Graphite with Graphite fibres	In air = 842°F Inert = 1,202°F	0-14	Preferred, Expanded Graphite, packing for rotary applications.	Pressure 580 psi Speed 6000 fpm	Pressure 290 psi Speed 400 fpm	Pressure 4,350 psi Speed 200 fpm
vT9	Pure PTFE fibres with PTFE Lubrication	-40°F +536°F	0-14	100% Pure PTFE, general chemical pump, pure white, packing.	Pressure 725 psi Speed 2400 fpm	Pressure 1,450 psi Speed 400 fpm	Pressure 1,740 psi Speed 200 fpm
vT5	PTFE Ramie fibres	-22°F +248°F	2-12	Low cost, natural fibre packing, for general duty pumps.	Pressure 362.5 psi Speed 2400 fpm	Pressure 870 psi Speed 400 fpm	Pressure 1,450 psi Speed 300 fpm
vr31	Expanded Graphite with Inconel Wire	In air = 1,112°F Inert = 5,423°F	0-14	The Preferred valve packing, especially for high temperature, high pressure applications	NOT Recommended	NOT Recommended	Pressure 4,350 psi Speed 100 fpm
vr3	Braided Expanded Graphite packing	In air = 1,112°F Inert = 5,423°F	0-14	Preferred valve packing, for moderate pressure.	Pressure 290 psi Speed 5000 fpm	Pressure 290 psi Speed 400 fpm	Pressure 2,175 psi Speed 200 fpm
vT9D	Fine Pure PTFE fibres with PTFE Lubrication	-328°F +536°F	0-14	100% Pure PTFE, packing for all valves up to 250°C.	Pressure 580 psi Speed 1200 fpm	Pressure 2,175 psi Speed 400 fpm	Pressure 2,900 psi Speed 200 fpm
vT8	100% Unsintered PTFE & PTFE Tape	-150°F +500°F	0-14	Low cost, PTFE small valve packing.	NOT Recommended	NOT Recommended	Pressure 1,450 psi Speed 200 fpm
vF4	PTFE Lubrication, Flax Yarns	-22°F +248°F	2-12	The most common packing used for marine stern tubes.	Pressure 290 psi Speed 2000 fpm	Pressure 725 psi Speed 400 fpm	NOT Recommended
vT6	P.A.N fibres, PTFE Dispersion	-40°F +482°F	1-14	The industry standard, road tanker man-lid, braided packing.	St At Ic t ANKS ONI Y		

PremaTUre glanD Packing FailUre moDes

A used or worn set of packing can be of value as it often indicates causes of premature packing failure. examine it carefully. the following table should assist when troubleshooting causes of packing problems.

INDIcAtION	FAIlUre MecHANISM	ActION
No leakage at start up.	Gland over tightened.	back off gland to encourage initial leakage and lubrication. If negative suction, install lantern ring and connect to discharge.
excessive leakage at start up.	Incorrect sizing or fitting of packing.	check for correct packing size. check if the rings were installed properly.
leakage along outside of gland follower.	packing improperly fitted.	repack with care after checking shaft for wear.
excessive leakage.	packing swollen or decomposed. leakage through ring joints (rings cut too short or wrongly assembled). Washout of lubricants. Shaft eccentricity. expansion of stuffing box.	change to compatible packing. replace with correct size ring. change to a packing which resists the action of the sealed fluid. check shaft run-out. examine shaft bearings. check stuffing box material. Arrange cooling if box is liable to run hot.
packing extruded into space between shaft and housing or gland follower.	Designed clearance excessive or part worn by abrasives or shaft bearings inadequate.	reduce clearances, check bearings, apply bushings. May also be excessive gland pressure. Suggest use a combi packing.
packing rings extruded into adjacent rings.	rings cut too short.	repack with accurately cut rings.
rings disappear in set.	packing entering the system.	Install bottom bushing or one ring of vulcan vK4b.
packing rings flattened out on I.D. Under the rod or shaft.	Worn bearings may be causing whip or run-out.	check alignment of shaft and condition of bearings.
Used packing scored on outside surface, possibly leakage along bore of box housing.	packing rotating with shaft due to being undersized.	check dimensions of housing and packing.
packing rings near gland follower very compressed.	packing fitted improperly.	repack with care and check.
bore of used packing charred or blackened, possibly shaft material adhering to packing.	lubrication failure.	change packing to one of more suitable lubricants or material, or fit lantern ring with lubricant feed.
Shaft badly worn along its length.	lubrication failure.	change packing to one of more suitable lubricants or fit lantern ring with lubricant feed.
packing abraded.	Abrasives in fluid.	Fit filter. Flush stuffing box with clean fluid.

glanD Packing eqUivalenTs

chesTerTon ®	vulcan equivalent
1	vG4
2	vG4
80	vF225
329	vF4
370	vK1I
412-W	vt2
477 & 477-1	vK1I
1315	vG2
1400	vr3
1400r	vr4
1710	vG8I
1724	vt9D
1725	vt9S
1727	vc1
1728	vt9I
1730	vM1
1740	vK4
1750	vp2
1760	vp2
1800	vc51
1830	vp2
Innerlube	vt2

crane ®	vulcan equivalent
387I	vc51
1335	vt2
1336	vr3
1340	vG2
1625G	vr3
1635G	vG4
c1045	vt9D
c1050	vt9I
c1056	vt9S
c1057	vt9S
c1061	vK4t
c1064	vK5
c1065	vp2
c1070	vp2
G57	vr3
G58	vr3
K1730	vK4
K1760	vM1/vM5
K1761	vM1/vM5

garlock ®	vulcan equivalent
18	vF225
90	vF225
98	vc5
G 100 & 200	vG4
127-AFp	vc51
G 700	vG4

garlock ®	vulcan equivalent
740	vF225
904	vK4
1300 & 1300-e	vr3
1303	vr31
1304	vr3
1333-G	vr3
1607-pM7	vt9D
1812	vM1/vM5
1925	vt2
1965	vG2
5000	vG2
5100	vp1
5200	vK4
5413	vF4
5450	vG6
5481	vG6
5888	vt9I
5889	vt9D
5900	vt9S
5904	vt9S
8909	vG2
8913	vG2
8921-K	vK4t
8922	vt2
8968	vG7
Graph-lock	vr1 or vr2
thermo-ceram	vc3
41501	vt2
41602	vG2
41603	vG2
41605	vK4
41606	vp2
41607	vt9D
41608	vt9I
41616	vp2

PalmeTTo ®	vulcan equivalent
1007	vG2
1030	vr3
1300	vK1I
1340	vK4t
1347	vt2
1350	vK4
1359	vK5
1367c	vM1/vM5
1367FS	vt9S
1367H	vt9D
1367S	vt9I
1371	vM1/vM5

PalmeTTo ®	vulcan equivalent
1382	vp2
1389	vp1
1390	vp2
1392	vM1/vM5
1400	vr1
1550	vr3
1555	vG4
1585	vc5
1600	vF225
1613	vF4
1900	vt8
4062	vc51
5000	vr3
5080	vr3
palfoil	vr1
palpack	vt8
pinnacle	vr2
pinnacle Flexibraid	vr3
vA1389	vp1

sePco ®	vulcan equivalent
2	vF225
2Gr	vGc206
219	vF4
310	vc51
MI 402	vG2
MI 560	vK1I
MI 2001	vr3
MI 2225	vt2
MI 2225A	vK4t
MI 2235	vt9I
MI 2236	vt9S
MI 2240	vM1/cM5
MI 2254	vt9D
MI 3333	vc5
MI 3600	vp2
MI 4002	vp1
MI 4004	vK5
MI 4444	vr3
MI 4500	vG4
MI 4700	vM1/vM5
MI 4800	vK4
MI 6225	vM1/vM5
MI 6402	vr3
MI 8002	vp2

glanD Packing eqUivalenTs

TeaDiT®	vulcan equivalent
16	vp1
17	vt9D
18	vt9S
19	vt9I
25	vK4b
26	vK4
27 A	vG8I
27 Av	vG8D
2138	vF225
2202	vr3
2214	vc51
2255	vG2
2421	vF4
2422	vt5
3040	vt9D
3050	vt9I
27 G	vG1I
27 GA	vG1D
34	vt5
35	vF225
37	vGc206
209	vt5
245	vF225
2000	vr3
2001	vG4
2001Ic	vr3
2002	vG4
2003	vK4t
2004	vK4
2005	vt9D
2006	vt9I
2006FDA	vt9S
2006S	vt9I
2007	vp2
2017	vK5
2019	vG8I
2027	vG1D
2030	vM1/vM5
2044	vK4
2127	vt2
3078	vp2
4000	vG4
4001	vG2
4002	vc5
4090	vr3

TeaDiT®	vulcan equivalent
4090/I	vr31
5000	vK4b
5001	vK4t
5002	vK4
5003	vK1I
5004	vK5
6002	vG8I
6004	vG1D
8300	vt2
8500	vt9S
8800	vG2

Universal Packing ®	vulcan equivalent
7808	vG2
7803	vt2
7120 e	vp1
7783 I	vt9I
7538	vM1/vM5
7244	vc51
74490	vr3
7726	vK1I/vK1D
7110G1	vr3
7110G2	vr31

U.s. seal mFg.™	vulcan equivalent
58	vp2
302	vt2
303	vG2
310	vc1
792	vt9S

UTex®	vulcan equivalent
155	vF4
165	vF4
200	vF4
201	vF4
204	vF225
206	vF4
208	vF4
210	vp1
212	vK4
213	vK4b
214	vK5
215	vK4t
216	vK5
217	vK4t

UTex®	vulcan equivalent
220	vK4
222	vK4
225	vK5
226	vr3
227	vr31
228	vp2
229	vG4
230	vc5
231	vt9I
232	vt9D
233	vF4
234	vM1/vM5
235	vM1/vM5
236	vG2
237	vt2
238	vt2
240	vK4b
241	vK4t
243	vp2
244	vp2
245	vt9S
246	vp2
248	vM5
249	vp2
251	vt2
256	vp2
276	vt9I
279	vp2
277	vG2
278	vt9S
280	vG4
609	vc5
610	vr3
631	vr3
632	vr3
683	vr31
684	vr31
685	vr31
686	vr3
687	vr4
688	vr3
689	vr31
690	vG4
691	vr31