

# MECHANICAL GLAND PACKINGS, FLUID SEALANTS, JOINTING GASKET SHEETS & INSULATION TEXTILES



**CHAMPION SEALS (INDIA) PVT. LTD.**

[www.championseals.in](http://www.championseals.in)

## INTRODUCTION

Advanced developments in all areas of industry demands high-tech Packings. Though continuous research and experience of more than 40 years with most modern technique and materials, we are able to master all the fields of application while giving highest functional reliability.

**Champion** Gasket sheets & Stuffing Box packings are renowned quality products. We embrace the entire spectrum from consultancy to problem solving to suit your particular application.



Field Of Application	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation
<b>S T E A M  S U P E R  H E A T E D  S T E A M</b>	1100	325°	Lubricated and graphited general purpose asbestos packing for Glands for medium pressure conditions conforming to IS Specification 4687 & DGS&D Specification.
	1200	350°	Incorporated with white metal wire for low friction and greater mechanical durability. Suitable for rotary shafts with peripheral speeds upto 550m./ min. Recommended for steam, hot water, weak acids and alkalies.
	1300	500°	Brass wire reinforced asbestos yarn packing. Specially suited to high speed rotary and reciprocation shafts even at higher temperature and pressure. Incorporation of Brass wire improves its strength and anti-friction properties. It is recommended for saturated and super heated steam, hot water, air,air, gases, oils, steam, expansion glands, rotary and reciprocating equipments.
	1490	325°	Special grade of asbestos DUPLEX BRAID packing suitably lubricated and treated with graphite to withstand caustic liquors, including caustic potash, soda, lime, ammonia and sulphides. An ideal packing for paper mill application. pH 4 - 12.
	1800	490°	Non-metalic asbestos lubricated and graphited packing for high pressure saturated super heated steam conforming to IS Specification 4687 & DGS&D Specification.
	1850	490°	Same as above, meant for STAINLESS STEEL RODS.
	1860	325°	<b>VALVE TWIST</b> : For valve stems, small valva spindles, stuffing boxes and miniature apparatus in full steam. The packing can be twisted to requisite sizes to be fitted in the gland.
	1910	540°	A closely brained high content asbestos yarn packing, non-metallic, lubricated with special heat resisting dry lubricant. Specially recommended for high pressure super - heated steam services. Excellent soft packing for valve glands, gauge glass fittings, turbines, boilers and similar applications. Please state when spindle / rod is STAINLESS STEEL.
	1916	815°	Braided from high grade asbestos yarn suitably lubricated and reinforced with stainless steel wire. This is an ideal choice for high temperature valve application and is suitable for service with steam, butane and propane gases, oil vapour, furnace oil etc. Please state when spindle/rod is STAINLESS STEEL.
	1960	680°	A specially developed braided packing for super sealing jobs made from high grade asbestos fibre yarn reinforced with inconel wire and suitably lubricated. It will function most effectively for super sealing jobs on value stems in power plants & oil refineries. A well recommended packing for control valves at high pressure and temperatures and various other applications. Please specify when rod / spindle is STAINLESS STEEL.



Field Of Application	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation	
<b>O I L &amp; S O L V E N T S  A C I D S  A L K A L I E S  C H E M I C A L S</b>	*	1	-200° to +280°	A super fluorocarbon fibre interbraided packing. This packing is developed for valves, mixers, agitators involving application for highly corrosive chemicals, oxygen service, acids and alkalis. Pressure 400 bar, pH 0 - 14.
	*	2	-200° to +280°	A 100% pure PTFE packing impregnated with a special chemically inert suspensoid. A good packing for control valves, pumps handling corrosive gases, ammonia, foodstuffs and pharmaceuticals. It is an ideal packing for sealing dryers, mixers and agitators. Due to high tensile strength of the fibre, this packing is best suited to be used in high pressure valves and reciprocating pump application. Pressure 500 bar, pH 0 - 14.
	*	3	-200° to +280°	<b>UNIVERSAL APPLICATION</b> : A PTFE fibrous packing having special DUPLEX BRAID to increase dimensional stability, treated with inert high temperature lubricant. This packing is safe, non-toxic and flexible for use on pumps, for concentrated acids, alkalis, oils, solvents and gases. Pressure 350 bar, pH 0 - 14.
	*	23	-250° to +300°	A DUPLEX plaited flexible combination packing having super grade fluoropolymer intimately treated with graphite to enhance lubricity and heat dissipation. This packing is self lubricating, mechanically strong & widely used in chemicals, petrochemicals, power plants, paper, pulp and food industries. Pressure 350 bar, pH 0 - 14.
	*	36	-212° to +280°	A graphite bonded fluoropolymer fibre packing DUPLEX BRAIDED to improve thermal conductivity and lubricity for maintaining extremely low friction, chemical resistance and reduce maintenance cost. Best suited to valve stems, centrifugal pump, wood pulp, caustics, oils, solvents, acids and strong chemicals. This packing is widely used in Refineries, Petrochemicals & Fertilizer Industries. Pressure 250 bar, pH 0 - 14.
	*	38	-200° to +600°	An interbraid carbon filament high temperature resistant packing with low friction characteristics for sealing in boiler feed pumps, high temperature high pressure valves, condensate, dryers, against not-oxidising mineral acids, fuel oils, thermic fluids, petroleum products, steam and water. This packing has excellent thermal dissipation and self lubricating properties. Pressure 350 bar, pH 1 - 14.
	*	66	-100° to +650°	A 100% pure graphite fibre packing treated with special high temperature lubricant to prevent seepage through the packing. This packing is self lubricating. It eliminates shaft wear because of graphite fibre which has low co-efficient of expansion, high heat conductivity and high temperature resistance. A premium service packing to withstand against acids, alkalis, oils, solvents, steam, fuel oil, hot tar pumps and hydrocarbons. It is universally being used by maintenance technicians to seal the most demanding application in valves and pumps. Pressure 350 bar, pH 0 - 14.
	*	68	-200° to +500°	This is a pure expanded graphite packing. It is chemically inert, resilient, compactable, self lubricating packing with low frictional co-efficient and having high thermal conductivity. Pressure 300 bar, pH 0 - 14.

\* Asbestos Free (Contains No Asbestos)



Field Of Application	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation
O I L & S O L V E N T S  A C I D S  A L K A L I E S  C H E M I C A L S	* 172	-200° to +280°	This is a cross braided combination packing having pure PTFE fibre with special high pressure resistant fibre filament yarn incorporated in it. This packing is most suitable to all fluids and corrosive chemicals. It has exceptionally good dimensional stability, creep resistance and is non toxic. Recommended for dairies, food and pharmaceutical industries, refineries & fertilizer plants. This Packing can withstand high pressure conditions in both rotary and reciprocating application. Pressure 500 bar, pH 2 - 12.
	* 174	-200° to +300°	An advanced technology packing. A special Duplex Braided construction made from synthetic aramid fibre, as strong as steel, and most flexible. Recommended for pumping granular and viscous fluids, even under high pressure condition. This packing is suitable for solvents, abrasive slurries fuel oil, high pressure dosing pumps alkalies and mild acids. A most effective packing for refinery, high pressure water injection system and as anti extrusion packing. Pressure 280 bar, pH 3 - 12.
	* 176	-200° to +300°	A high quality combination packing incorporated with graphite / PTFE fibres and special synthetic fibre to give additional reinforcement of sliding surface and heat dissipation property. It is most suited to centrifugal and reciprocating pumps with high pressure and sliding velocity for abrasive media. It resists hot water, oil, gases, greases liquid ammonia and carbamate solution under high pressure conditions. Pressure 500 bar, pH 3 - 12.
	* 1003	-150° to +300°	A combination packing inter braided with PTFE fibre, chemical resistant fibre and special compound to resist hot concentrated alkalies, organic and dilute acids.  A very special low friction packing recommended to be used with high speed pumps, agitators shafts, oils, solvents, ammonia solution, concentrated caustics and Ketones. pH 2 - 12.
	* 1094	-150° to +300°	<b>UNIVERSAL APPLICATION</b> : High grade asbestos fibre yarn Duplex Braided packing impregnated with special PTFE suspensoid for severe caustic and other corrosive chemicals, solvent, oils and petroleum byproducts & oxygen service. pH 2 - 12.
* 1603	-150° to +300°	A combination packing with specially selected fluoropolymer PTFE fibre and chemical resistant inorganic fibre yarn for resisting corrosive medium and concentrated acids. This construction improves the strength and chemical inertness of the packing. This combination packing is further treated with PTFE suspensoid. This packing can be used against acids, chlorine, in valves, pumps having chrome plated or stainless steel shafts. pH 2 - 14.	
	BELKA		<b>A braided form of packing manufactured in size 3, 4 &amp; 5 mm. Sq. or round section in different styles of packing. It is specially designed for use in stuffing boxes, accurate small glands and valves.</b>

\* Asbestos Free (Contains No Asbestos)



Field Of Application	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation
<b>M A R I N E  H Y D R A U L I C  W A T E R  O I L</b>	* 2222	-40° To +130°	This is a specially developed lubricated, non-graphited, long venerable fibre braided packing for marine application. It has been further lubricated with low friction dry lubricant to enhance anti-friction property for use in sea water and fresh water application, water wheel shafts or rudder an stern glands.
	* 2224	-40° To +150°	The most critical parts to seal in a ship are the stern tubes and the rudder posts. With this in mind, a most reliable packing is specially developed from Non-asbestos tough vegetable fibres. The packing is impregnated with lubricants which protect the packing structure. This packing is therefore most suited for use in marine applications against sea water in rudder posts and stern tubes, oils, weak alkali solutions and in paper plants.
	* 2300	130°	This packing is manufactured from high tensile strength vegetable fibre thoroughly impregnated with a special lubricant and graphite. Suitable fo fresh and salt water, pen-stock and heavy duty hydraulic applications.
	* 3116	-40° To +130°	A fine natural fibre braided packing impregnated with lubricants and graphite. Recommended for use on reciprocating and rotary pumps, valve spindles, refrigeration machinery and compressors. The packing presents a smooth surface that will not score shafts or sleeves because the fibre constantly absorbs the liquid being pumped and maintains a soft and pliable running face on the shaft.
	* 374	-40° To +150°	DUPLEX BRAIDED fine soft vegetable fibre packing, self lubricated. Each strand of this packing is specially impregnated with additives along with break-in-lubricant having the property of self lubrication and media repelling action. This packing is best suited to seal glands of pumps, valves handling condensates, demineralised water and for cold and hot hydraulic applications.
* 376	-40° To +130°	A special non-graphited soft natural fibre yarn packing impregnated with first grade lubricant suitable for high speed centrifugal pumps, compressors and refrigerations, cooling water and condensate pumps. Owing to the pliable nature of the material used, this packing permits free motion of the rod.	
* 600 'A' STEAM	280°	An asbestos proofed semi-metallic packing with strips of white metal intermittent layers embedded. Used on steam expansion glands, marine engines, compressors, pumps, winches and hoists. A special high pressure medium temperature packing for ships and ship building industry, suqar mills, etc.	

\* Asbestos Free (Contains No Asbestos)



Field Of Application	Product	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation
H E A T  I N S U L A T I O N	* CERAMIC			Ceramic Yarn/Cloth have proved to be efficient and economical in High Temperature thermal insulation application in different industries including Petrochemicals, Glass, Steel, Metals, Chemicals Plants, Ship Building, Nuclear Power Plants, Extremely High Temperature working in lining industrial furnaces, process heaters, etc.
	* ROPE	7000	1250°	Ceramic rope in round/sqare section.
	* YARN	7012	1250°	Ceramic lagging rope having low density bulk fiber inside and braided on the outside using ceramic yarn.
	* CLOTH	7056	1250°	Ceramic yarn, nominal Ø 1.5mm & above.
	* ASBESTOS	7132	1250°	Ceramic cloth 3.2 mm thick, 1 m width.
	* LAGGING ROPE	7012	1250°	Low density fluffy asbestos fibre filled rope enclosed in a braided mesh cover. Used for insulation of steam pipe lines in power plants an industries in sizes 12 mm Ø to 51 mm Ø in standard coils of 30 meters.
	* SPECIAL	SPECIAL	500°	Special lagging rope is produced for specific high temperature insulation of packing for Dummy Bar in molten steel castings and such other purposes.
	* ASBESTOS	1056	315°	1.5 mm thick is twisted to sizes upto 50 mm Ø. For Dry Heat, caulking between rough or irregular surfaces, Blast Furnace connections, Coke Ovens, Gas Generator etc.
	* YARN	SPECIAL	500°	Special Yarn is produced in different grades to meet with specific requirements of higher temperature insulation.
	* ASBESTOS	1000	350°	Asbestos dry plaited general steam and insulation packing for hot gases, oven, autoclaves, etc., conforming to IS Specification 4687 & DGS&D Specification.
	* BRAIDED ROPE	1900	650°	This Chrysotile, white dry, high purity, non-metallic, braided packing is used where severe high temperature conditions prevail. Best suited for expansion joints, door ovens, caulking of joints, exhaust pipe wrappings, ductings etc.
	* ASBESTOS CLOTH			Asbestos cloth is used for thermal insulation in power plants, boiler mattresses, pipe lines, protective clothing and smothering fires. Available in plain or dust suppressed form.
	* 150		315°	Plain Weave Cloth 1.6 mm thick
	* 155		315°	Plain Weave Cloth 2.0 mm thick
* 132		315°	Plain Weave Cloth 3.0 mm thick	
* 182		500°	1.6 mm cloth to DGS&D G/MISC/81/C Special Quality.	
* 186		500°	3.2 mm cloth to Indian Navy Spec INTC/23 Special Quality.	
* AAA		500°	Special Asbestos Cloth used for Diaphragm in Electrolytic cells and high temperature applications.	
S E A L I N G	* 1331	1331	315°	Wire reinforced Asbestos Cloth 1.6 mm thick
	* RUBBERISED CLOTH	122	170°	Asbestos non metallic sheeting proofed with rubber, used for gasket joints, sealing handholes & manholes of boilers, covers of tanks and pressure vessels and applications against air, steam and water. Thickness 1.5 mm and above.
	* 122M	122M	170°	Similar to style 122 but with wire reinforcement.
	* RUBBERISED TAPE	319	170°	Asbestos tape proofed with rubber for purposes of jointing for manhole and mudhole covers on boilers, tanks and pressure vessels. In coils of 30 meters with thickness upto 6 mm and width 12.5 mm onwards.
	* 319 M	319 M	170°	Similar to style 319 but with brass-wire reinforcement.

\* Asbestos Free (Contains No Asbestos)



Field Of Application	Product	Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation	
M O U L D A B L E  F I B R O U S  P A C K I N G S		1700	300°	This is mouldable loose packing manufactured out of touch selected High Grade long Asbestos Fibres blended with special lubricant and graphited throughout, of non-metallic composition. Suitable for superheated and High Pressure steam, Gases and Oils. Do not use against stainless steel rods, strong acid & alkalies. Packs of 750 gms.	
		1710	400°	It is a semi-metallic fibrous packing of asbestos fibre with metal shreds of antifriction white metal blended in the composition with special lubricants and graphited throughout. Recommended for similar use as style 1700, but under excessive high pressure and temperature. The packing has low frictional properties. Avoid using on Brass or soft Bronze rod surfaces. Do not use against stainless steel rods, strong acid & alkalies. Packs of 750 gms.	
	*	1715	400°	Long selected Asbestos Fibre specially processed with heat resisting rubber compound which vulcanizes on being heated. For packing grooves in steam cock. Pack of 200 gms.	
	*	1720	400°	Long selected Asbestos Fibre processed with rubber compound which does not vulcanize. For stuffing boxes of cocks and valves, water gauges and boiler test cocks. Pack of 200 gms.	
*		1750 SS	500°	For use against STAINLESS STEEL RODS. This is a mouldable loose fibrous asbestos packing blended with special lubricants. For high temperature steam, hot and cold water, air and oil service in valves and centrifugal pumps. The loose packing can be tamped into stuffing box and when rammed hard into a gland, it will form a dense homogenous mass which is impervious to high temperature and pressure. It serves best when hardening or disintegration of bonding is objectionable. It remains responsive to gland compression and is easily adjusted by slight additions to overcome leakage if and when additional packing is required. Recommended for duty on worn-out and mal-aligned shafts For best results seal with a ring turn of Champion Style 1850 Braided Packing both at beginning and end to prevent extrusion. Pack of 750 gms.	
E L E C T R I C A L S	*	MANTLE YARN	1502	Polished asbestos yarn is the standard quality of yarn for use in mantles of incandescent gas lamps.	
	*	LISTING TAPE		300°	For insulating traction motor coils and in electrical winding, In 19mm & 25 mm width & 33 meter rolls.
	*	WEBBING TAPES		315°	Metallic and non metallic tapes for electrical cables, switch boxes, drying ovens and heaters; available in variable widths upto 300 mm.  1.6 mm (100 meter rolls), 3.0 mm to 6 mm (50 meter rolls)
	*	CABLE YARN	1090	250°	Asbestos yarn for stranding / braiding electrical cables.

**Information in this catalogue is based on our general experience and is given in good faith, but because of the many particular factors which are outside our knowledge and control and affect the use of products, no warranty is given or is to be implied with respect to such information.**

\* Asbestos Free (Contains No Asbestos)

# CHAMPION CAF JOINTING SHEETS

Style No. "CHAMPION"	Temperature Centigrade	Service Recommendation
20	380° 35 Kg / cm <sup>2</sup>	CHAMPION STYLE 20 (Red) Jointings are developed for general purpose applications and this quality is applicable to a wide range of duties with less severe working conditions of temperature and pressure. (IS 2712 - 1998, Grade W / 3)
39	440° 80 Kg / cm <sup>2</sup>	Used for applications against dry and wet steam, water, gases, alkalies, oil at normal temperatures, chemicals, fuels etc. (IS 2712 - 1998, Grade 0 / 2)
51 HIGH PRESSURE	440° 80 Kg / cm <sup>2</sup>	Used for applications against steam, neutral non-flammable gases, alkaline solutions, dyes, fats and oils, alcohols, motor fuels etc. (IS 2712 - 1998, Grade W / 2)
54 SUPER	550° 150 Kg / cm <sup>2</sup>	Used for applications against superheated steam, Oxygen, petroleum distillates oils and fats, fuels, internal combustion engines, hydrocarbons, alcohols, solvents, dyes etc. (IS 2712 - 1998, Grade W / 1)
54 SUPER METALLIC	600° 160 Kg / cm <sup>2</sup>	The Super Metallic gasket sheet is superior in performance over other forms of Jointing Sheets where severe physical conditions of High Pressure and temperature have to be resisted. It is effectively used under rapidly changing operating conditions of pressure, where vibrations are experienced, where the flange of the gasket joint is narrow, in diesel exhaust manifold, cylinder head gaskets, internal combustion engines and Air Compressors.
UNIVERSAL METALLIC	600° 225 Kg / cm <sup>2</sup>	Used for applications of fluctuating pressure and temperature sheets with mesh for high pressure.
59 OIL	550° 150 Kg / cm <sup>2</sup>	Used for applications in oil & petrochemical industries, against aromatic substances, sulphurous compounds, chloric hydrocarbons, phenols, refrigerants etc. (IS 2712 - 1998, Grade 0 / 1)
60 ACID	210° 150 Kg / cm <sup>2</sup>	Acid resisting jointing, used in applications against hot concentrated organic, Inorganic and mineral acids including hydrochloric, sulphuric (oleum) and nitric acids. (IS 2712 - 1998, Grade A / 1)
UNIVERSAL	600° 200 Kg / cm <sup>2</sup>	Used for applications with hot oil and thermal fluids.

**FOR YOUR REQUIREMENT of Champion CAF JOINTING SHEETS & ASBESTOS FREE (AF) JOINTING SHEETS, PLEASE refer our detailed Jointing Sheet Catalogue.**



## CHAMPION SEALS (INDIA) PVT. LTD.

Champion Compound, 15 Parsi Panchayat Road, Andheri (East), Mumbai - 400 069.

Tel.: +91-22-28367311 ■ Fax: +91-22-28208686 / 28367316

E-mail : sales@championseals.in ■ exports@championseals.in ■ www.championseals.in