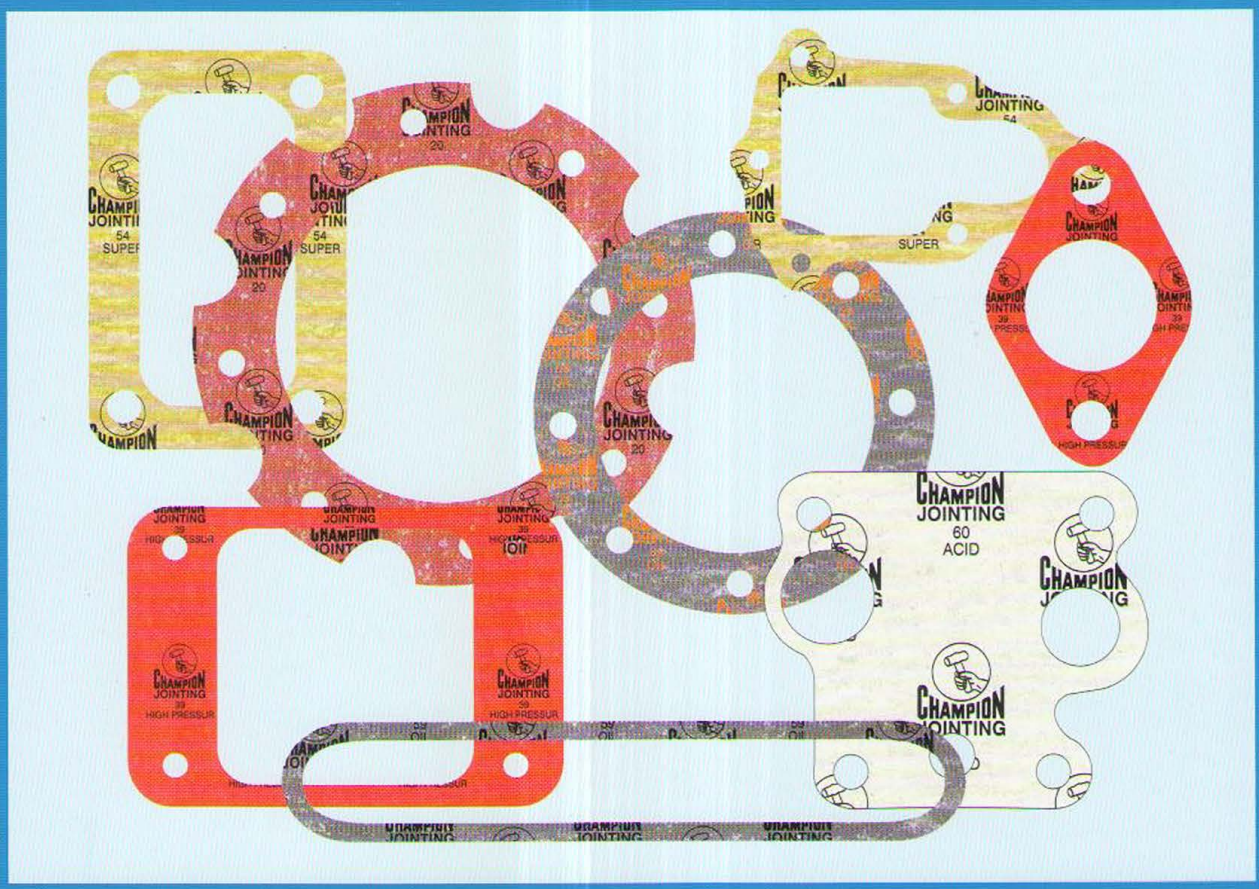
CHAMPION®

Regd. Trade Mark

COMPRESSED ASBESTOS FIBRE JOINTING SHEETS & GASKETS



INTERNATIONAL QA UKAS QUALITY MANAGEMENT

An **ISO 9001** certified company.

CHAMPION SEALS (INDIA) PVT. LTD.
SEALANT & GASKET (INDIA) PVT. LTD.

www.championseals.in

CHAMPION STYLE 20 STEAM

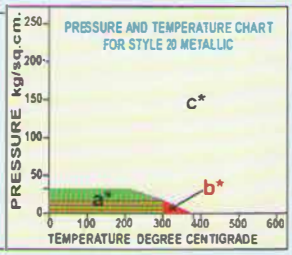
DESCRIPTION : Compressed Asbestos Fibre Jointing is a consistently uniform and resilient product. A price worthy quality of dependable performance, plus adaptability to many sealing requirements makes this 'STEAM' JOINTING the choice sheet packing of Plant Engineers and Maintenance men. CHAMPION STYLE 20 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.

IDENTITY COLOUR — **RED OR GRAPHITED**

TECHNICAL DATA

Recommended Maximum Temperature	**380°C.**
Recommended Maximum Pressure	**35 Kg/sq.cm.**

Specification Compliance
(IS 2712 - 1998 Grade W/3),
(IS 2712 - 1971 Grade C.)



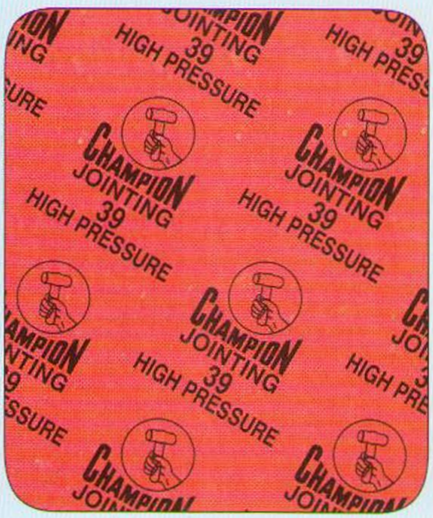
CHAMPION STYLE 20 METALLIC

DESCRIPTION : A Compressed Asbestos Fibre Jointing with wire gauze insertion supplied with Graphite Finish. Used for general purpose application where conditions of temperature and pressure are not too severe.

IDENTITY COLOUR — **GRAPHITED BLACK**

TECHNICAL DATA

Recommended Maximum Temperature	**415°C.**
Recommended Maximum Pressure	**40 Kg/sq.cm.**



CHAMPION STYLE 39 HIGH PRESSURE

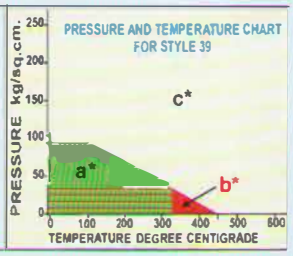
DESCRIPTION : Manufactured from selected quality of Asbestos Fibre and vulcanized with special rubber compound to meet with the exacting requirements of modern industry. Used for applications against dry and wet steam, water, gases, alkalies, oil at normal temperatures, chemicals, fuels etc. and general engineering. CHAMPION Style 39 can also be provided with wire gauze insertion in graphited finish.

IDENTITY COLOUR — **ORANGE/GREY OR GRAPHITED**

TECHNICAL DATA

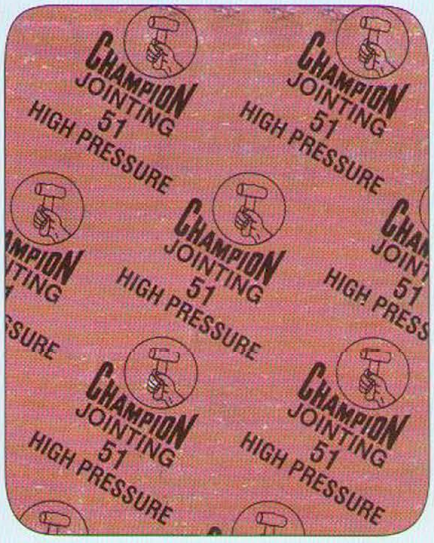
Recommended Maximum Temperature	**440°C.**
Recommended Maximum Pressure	**80 Kg/sq.cm.**

Specification Compliance
(Indian IS 2712 - 1998 Grade 0/2),
(IS 2712 - 1979 Grade W/2),
(IS 2712 - 1971 Grade B/S)
(British BS 2815 - 1973 Grade B)



***Guidelines For Application**

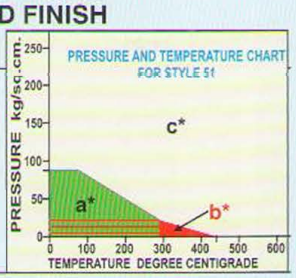
a) The gasket material is suitable subject to chemical compatibility.
b) The gasket material is suitable for short term temperature fluctuation or noncritical application.
c) For Extreme service conditions, Kindly consult CHAMPION Technical Support.



CHAMPION STYLE 51 HIGH PRESSURE

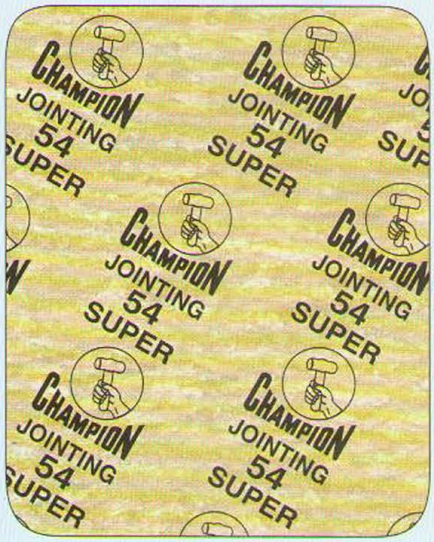
Description : Manufactured from selected Asbestos Fibre and bonded with high grade binder compound, this product has a wide range of applications in the industrial field. Recommended against steam, neutral non flammable gases, dyes alkalies, fats, oils, alcohols, motor fuels and such other engineering service conditions which do not warrant the use of as High Grade material such as CHAMPION Style 54 SUPER

IDENTITY COLOUR BROWN/GREY OR GRAPHITED FINISH
METALLIC & NON-METALLIC



TECHNICAL DATA

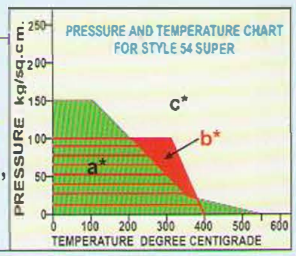
Recommended Maximum Temperature	440°C.
Recommended Maximum Pressure	80 Kg/sq.cm.
Specification Compliance	
(IS-2712-1998 Grade W/2), (BS 2815-1973 Grade B)	



CHAMPION STYLE 54 SUPER

DESCRIPTION : Manufactured from excellent quality of Chrysotile Asbestos Fibre and raw materials, the blend being intimately mixed with heat resisting rubber compounds under special process, to ensure maximum stability against high pressure and temperatures. Though primarily a super heated steam Jointing it is also recommended against saturated Steam, Oxygen, petroleum distillates, oils and fats, fuels, internal combustion engines, hydrocarbons, alcohols, solvents, lyes, etc. It is popularly used in MARINE ENGINES, electricity generating sets etc.

IDENTITY COLOUR YELLOW/GREY OR GRAPHITED



TECHNICAL DATA

Recommended Maximum Temperature	550°C.
Recommended Maximum Pressure	150 Kg/sq.cm.
Specification Compliance	
(Indian IS 2712 - 1998 Grade W/1), (IS 2712 - 1971 Grade A/S),	
(DGS & D G/MISC/81-C item 12 (a) Special Quality)	
(British BS 2815 - 1973 Grade A)	

CHAMPION STYLE 54 SUPER METALLIC

DESCRIPTION : A Compressed Asbestos Fibre Jointing Graphited embedded with a strong reinforcement of steel wire gauze, 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.

IDENTITY COLOUR GRAPHITED BLACK

TECHNICAL DATA

Recommended Maximum Temperature	600°C.
Recommended Maximum Pressure	160 Kg/sq.cm.

***Guidelines For Application**

a) The gasket material is suitable subject to chemical compatibility.
b) The gasket material is suitable for short term temperature fluctuation or noncritical application.
c) For Extreme service conditions, Kindly consult CHAMPION Technical Support.

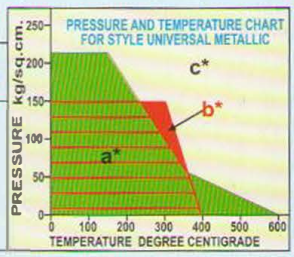
CHAMPION STYLE UNIVERSAL METALLIC

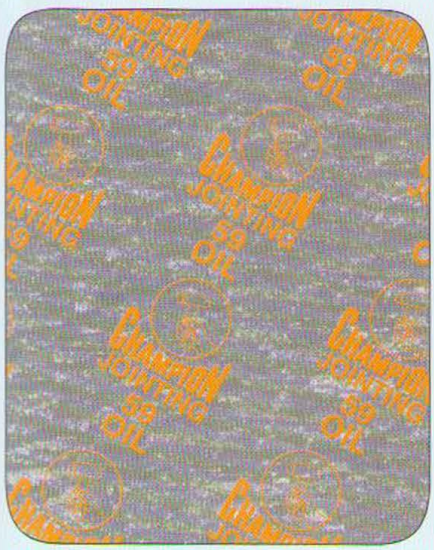
DESCRIPTION : This is a high grade jointing sheet manufactured from superior quality asbestos bonded with special grade rubber and chemicals. This is a high tech CAF jointing sheet specially designed for extreme conditions. This is developed only in metallic variety with special metallic wire net to prevent galvanic corrosion and special grade of graphite is used on the surface which acts as anti-release agent. This gasket is resistant not only to high temperature but also to extreme pressure surge which is a common factor in main steam line. This CAF jointing is suitable for super heated and saturated steam, hydrocarbon, sulphurous compounds phenols, refrigerants, alkalis etc.

IDENTITY COLOUR — **GRAPHITED BLACK**

TECHNICAL DATA

Recommended Maximum Temperature	**600°C.**
Recommended Maximum Pressure	**225 Kg/sq.cm.**





CHAMPION STYLE 59 OIL

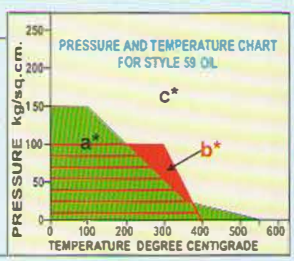
DESCRIPTION : A high grade Asbestos Fibre Jointing bonded with a sophisticated compound, this specialised jointing withstands the most exacting demands of oil and Petrochemicals plants, solvents refrigerator, oil etc. Used in pipe lines and apparatus of the petrochemical fields, petroleum distillates, oil and petroleum refining industries. It is also recommended in industrial processes with high contents of aromatic substances, sulphurous compounds, chloric hydrocarbons, phenols, refrigerants, etc. Use of CHAMPION oil jointing sheet assures safety and economy even on critical working conditions. The jointing gives satisfactory services against steam also.

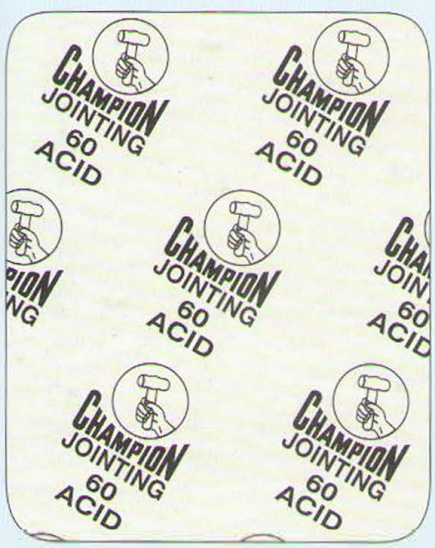
IDENTITY COLOUR — **DARK GREY**

TECHNICAL DATA

Recommended Maximum Temperature	**550°C.**
Recommended Maximum Pressure	**150 Kg/sq.cm.**

Specification Compliance
(Indian IS 2712 - 1998 Grade 0/1),
(IS 2712 - 1971 Grade A/O)
(DEFENCE TS RED/71/59), (British BS 1832-1972)





CHAMPION STYLE 60 ACID

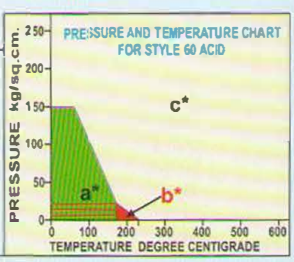
DESCRIPTION : This is a specialised Asbestos Fibre Jointing Sheet which is intimately bonded with Acid resisting compound, to withstand the corrosive action of acids and chemicals. Recommended for use against hot concentrated organic, Inorganic and mineral acids including hydrochloric, sulphuric (oleum) and nitric acids, under service conditions of temperature and pressures commonly encountered in Chemical Industries.

IDENTITY COLOUR — **CREAM/LIGHT GREY**

TECHNICAL DATA

Recommended Maximum Temperature	**210°C.**
Recommended Maximum Pressure	**150 Kg/sq.cm.**

Specification Compliance
(Indian IS 2712 - 1998 Grade A/1)



***Guidelines For Application**

a) The gasket material is suitable subject to chemical compatibility.
b) The gasket material is suitable for short term temperature fluctuation or noncritical application.
c) For Extreme service conditions, Kindly consult CHAMPION Technical Support.

CHAMPION STYLE UNIVERSAL

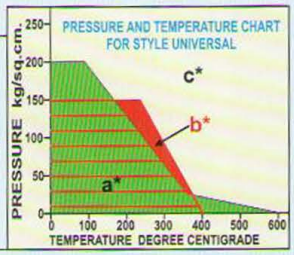
Description: This is a superior grade jointing sheet manufactured from high quality chrysotile asbestos bonded with special grade NBR binder. This is specially designed CAF jointing sheet for application over an unlimited range of critical application. This hitech CAF jointing is suitable for hydrocarbon, fuel oil, solvent, petroleum distillates, alcohol, aromatic substances, phenols, refrigerants, alkalis etc.

IDENTITY COLOUR — **DARK GREY**

TECHNICAL DATA

Recommended Maximum Temperature	**600°C.**
Recommended Maximum Pressure	**200 Kg/sq.cm.**

Specification Compliance
(IS 2712 - 1998 Grade W/1 & 0/1)



***Guidelines For Application**
a) The gasket material is suitable subject to chemical compatibility.
b) The gasket material is suitable for short term temperature fluctuation or noncritical application.
c) For Extreme service conditions, Kindly consult CHAMPION Technical Support.

MAJOR TECHNICAL FEATURES

STYLES	TENSILE STRENGTH N/mm²	STRESS RESISTANCE N/mm²	COMPRESSIBILITY %	RECOVERY %	IGNITION LOSS %	RECOMMENDED MAXIMUM TEMPERATURE	RECOMMENDED MAXIMUM PRESSURE
20	9.5	20	7.5-12	≥42.5	≤20	380°C	35 Kg/sq.cm.
20 M	12	20	7-12	≥45	≤20	415°C	40 Kg/sq.cm.
39	18	23	7-12	≥45	≤22	440°C	80 Kg/sq.cm.
51 High Pressure	15	23	7-12	≥45	≤22	440°C	80 Kg/sq.cm.
54 Super	28	28	6.5-11.5	≥50	≤25	550°C	150 Kg/sq.cm.
54 Super M	30	30	7-10.5	≥50	≤22	600°C	160 Kg/sq.cm.
Universal Metallic	33	32	7-11	≥48	≤23	600°C	225 Kg/sq.cm.
59 Oil	28	30	7-10.5	≥50	≤25	550°C	150 Kg/sq.cm.
60 Acid	27	25	7-12	≥45	≤25	210°C	150 Kg/sq.cm.
Universal	42	32	7-11	≥55	≤23	600°C	200 Kg/sq.cm.

Tests : Tests are conducted in our laboratory equipped with latest testing equipments according to international test specifications & ISI. Some of the important tests carried out are for *Compressibility, Recovery, Stress relaxation, Flexibility & Resistance to fluid media, besides the routine tests for tensile strength, ignition loss, density, etc.*

"Champion" Metallic jointing sheets : When the operating temperature / pressure is high and when the effective gasket area is small, jointing sheets with wire gauge reinforcement are suggested to be used.

Note: As the company's products are used for a multiplicity of purposes and as the company has no control over the method of their application or use, the company excludes all conditions or warranties, expressed or implied by statue or otherwise, as to their products and / or their fitness for any particular purpose. Any technical co-operation between the company and the customer is given for the customer's assistance only and without liability on the part of the company.

CHAMPION

COMPRESSED ASBESTOS FIBRE JOINTING SHEETS

Insist on Quality - Insist on Champion

"Champion" jointing sheet technology is based on a tradition which stretches back over few decades. With close co-operation with our customers, by constant development of composition of materials and by use of high quality raw materials, the company has produced reliable gasketing products which always correspond to the latest state of technology.

"Champion" products are developed with the strong belief on the proven fact that the most qualitative gasket is cheaper than the work necessary for changing an improper gasket.

Gasket Selection

Gaskets must maintain a seal for an acceptable period against all of the operational forces involved and to achieve this, there are eight important properties which any good gasket should possess:

- The gasket should not be porous to the fluid being sealed.
- The gasket should compress into the imperfections on the flange to create initial seal on application of sealing force.
- The gasket should not show significant creep under the influence of load and temperature. Such flow will allow the bolts to relax, reduce gasket surface stress and cause leakage.
- The gasket should be capable of catering to slight distortion between the flanges.
- The gasket should withstand chemical attack from the media being handled.
- The gasket has to be easily dismantled after use.
- The gasket should be able to withstand effects of temperature of the confined media.
- The gasket should not cause corrosion of the flange faces.

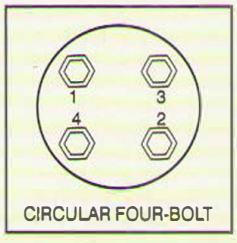
(Please visit our website, www.championseals.in for the questionnaire form to be filled and sent to us for our guidance on appropriate style selection for any new/existing applications.)

Champion Asbestos fibre jointing sheets are manufactured on latest factory equipments and developed with the aid of research and scientific facts to take care of one and all of above factors combined with highly specialised technical knowledge of Engineers with experience of a life time. Our products meet with the increasingly exacting requirements in Engineering and chemical industries for contact gaskets on fixed sealing faces. Champion Asbestos fibre jointing sheets are manufactured to international quality standards, which our customers can depend upon. The operating temperature for Asbestos fibre jointing sheet material is related to the thickness selected. Thinner materials offer better temperature and pressure properties.

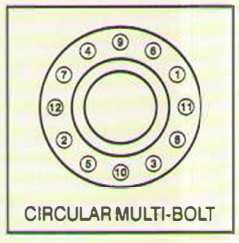
SHEET SIZE : 2Mx1.5M upto 6M, 2Mx2M, 2Mx3M, 2Mx6M, 1Mx1M, 1Mx1.5M, 1.5Mx1.6M (variation±5%)

Nominal Sheet Thickness Approx : 0.4/0.5, 0.75/0.8, 1.0, 1.5, 2.0, 3.0 mm upto 6.0 mm

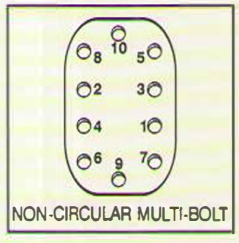
Proper Bolting Procedure



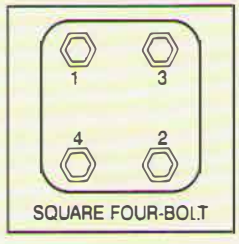
CIRCULAR FOUR-BOLT



CIRCULAR MULTI-BOLT



NON-CIRCULAR MULTI-BOLT



SQUARE FOUR-BOLT

The sequence in which bolts are tightened has a substantial bearing upon the distribution of contact area stress. Improper bolting may cock the flange out of parallel. It is important for proper sealability that the flanges are clean and free from any serious defect.

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CHAMPION SEALS (INDIA) PVT. LTD.
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Champion Compound, 15, Parsi Panchayat Road, Andheri (E), Mumbai - 400 069.
Phone : +91-22-2836 7311 - 15 Fax : +91-22-2836 7316 / 2820 8686
E-mail : sales@championseals.in Web : www.championseals.in

CHAMPION Style AF110 Steam

A cost effective product manufactured from ecofriendly natural cellulosic fibres bonded with suitable mix of elastomers.
Colour : Red & Green
Also available with wire gauze reinforcement and antistick coating.

General purpose gasketing material suitable for use with Oils, Solvents, Gases, Water, L.P. Steam and most dilute acids and alkalies (Low service conditions)
Max. Operating Pressure : 25 bars
Max. Short Term Service Temperature : 400°C
Max. Continuous Service Temperature : 250°C
Max. Operating Temperature for Steam : 180°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531
Recovery	ASTM F 36
Water Absorbtion	BS 7531
Ignition Loss	

CHAMPION Style AF120 Steam

A compressed synthetic Aramid fibre jointing sheet bonded with elastomers to create a matrix of stability
Colour : Green
Also available with wire gauze reinforcement and antistick coating.

Suitable for light industrial applications.
Media : Water, Gases, Medium Pressure Steam, Dilute Acids/Alkalies
(Medium Service Conditions)
Max. Operating Pressure : 50 bars
Max. Short Term Service Temperature : 400°C
Max. Continuous Service Temperature : 250°C
Max. Operating Temperature for Steam : 200°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531
Recovery	ASTM F 36
Water Absorbtion	BS 7531
Ignition Loss	

CHAMPION Style AF139 High Pressure

A high quality jointing sheet based on synthetic Aramid fibres bonded with NBR elastomer.
Colour : Orange
Also available with wire gauze reinforcement and antistick coating.

Suitable for use in applications involving hydrocarbons such as oils and solvents, steam, gases, glycols and aqueous solutions.
(Medium Service Conditions)
Max. Operating Pressure : 80 bars
Max. Short Term Service Temperature : 400°C
Max. Continuous Service Temperature : 250°C
Max. Operating Temperature for Steam : 200°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531
Recovery	ASTM F 36
Water Absorbtion	BS 7531
Ignition Loss	

CHAMPION Style AF154

A superior performance compressed jointing sheet incorporating a blend of special heat resisting Aramid fibres with a high quality nitrile elastomer binder
Colour : Yellow
Also available with wire gauze reinforcement and anti stick coating.

Suitable for use with Oils, Solvents, Gases, Steam, Dilute Acids and alkalies.
(High Service Conditions)
Max. Operating Pressure : 150 bars
Max. Short Term Service Temperature : 450°C
Max. Continuous Service Temperature : 250°C
Max. Operating Temperature for Steam : 290°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531
Recovery	ASTM F 36
Water Absorbtion	BS 7531
Ignition Loss	

CHAMPION Style AF159 Oil

A Premium grade jointing sheet based on special synthetic Aramid fibres bonded with nitrile elastomer
Colour : Grey
Also available with wire gauze reinforcement and antistick coating.

A universal grade suitable for many industrial sealing applications. Media : Hot oils, fuels, Hydrocarbons and refrigerants.
(High Service Conditions)
Max. Operating Pressure : 150 bars
Max. Short Term Service Temperature : 450°C
Max. Continuous Service Temperature : 250°C
Max. Operating Temperature for Steam : 250°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531
Recovery	ASTM F 36
Water Absorbtion	BS 7531
Ignition Loss	

CHAMPION Style AF160 Acid

A top quality acid resistant compressed synthetic Aramid fibre jointing sheet bonded with special binders.

Acid resistant grade. Recommended for use against hot, Concentrated Organic/inorganic/mineral acids.
Max. Operating Pressure : 150 bars
Max. Short Term Service Temperature : 250°C

Density	
Tensile Strength	ASTM F 152
Compressibility	ASTM F 36
Residual Stress	BS 7531
Gas Permeability	BS 7531