Material: FTL129

FTL129 is a closely woven, semi-flexible friction material. It is based on yarn spun from a blend of glass and synthetic fibres together with a fine copper wire to enhance its strength and heat dissipation properties. The impregnant has been specially developed to give it good frictional properties combined with a good degree of flexibility. It has a high coefficient of friction and performs well in wet and damp environments which makes it particularly suited for marine applications.

To help during fitting to brake shoes and bands it can be softened and made more pliable by warming in a bonding oven to between 150 & 1800C for sufficient time for the heat to penetrate the fabric.

This material is not suited to operate in oil-immersed conditions.

Application

Industrial drum and band-brakes
Industrial clutches
Marine towing winches
Miscellaneous industrial devices

Bonding

FTL129 may be bonded using any of the established adhesives recommended for friction material. However, to obtain the best results it is necessary to use a thermosetting adhesive.

Mating Surface

A good quality, fine grained, pearlitic cast iron or cold rolled steel with a Brinell hardness of 180. Cast steels are not recommended.

TECHNICAL DATA

Friction
for design purposes: Static (cold) 0.45
Dynamic (dry) 0.42

Recommended operating range
Pressure
Dynamic (dry) 70 - 860kN/m2 (10 -125 lbf/in2)
Static 70 - 2410 kN/m2 (10 - 350 lbf/in2)

Max. rubbing speed 25 m/s (82 ft/s)
Max. continuous temperature 110 0C
Max. intermittent temperature 180 0C
Max. temperature 225 0C

Size range

Roll
Lengths: 10 metres (nominal) below 15mm thick
7.5 metres (nominal) 15mm thick & above
Maximum width: 330mm below 15mm thick
510mm 15mm thick and above
Thickness range: 3.2 to 20.0mm

Sheets
1067 long x 660 mm wide
Thickness range: 4.8 to 12.7mm

Linings & discs:
Sizes on application

Test Conditions

Temperature Sensitivity (see over)
Application speed 15 m/s
Clamping pressure 0.61 MN/m2 (88.5 lbf/in2)

Initial Bedding
Application speed 15 m/s
Clamping pressure 0.61 MN/m2 (88.5 lbf/in2)
Average Temperature 1400C

Pressure Sensitivity
Application speed 15 m/s
Average temperature 800C

Speed Sensitivity
Clamping pressure 0.61 MN/m2 (88.5 lbf/in2)
Average temperature 800C

Physical Properties

Density	1.20 g/cc
Ultimate tensile strength Longitudinal	24 MN/m2 (3,500 lbf/in2)
Ultimate compressive strength	100 MN/m2 (14,500 lbf/in2)
Ultimate shear strength Longitudinal	17.2 MN/m2 (2,500 lbf/in2)
Rivet holding capacity	61.8 MN/m2 (9000 lbf/in2)
Thermal conductivity	0.79 W/m 0C

(All the figures shown above are based on mean values)

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