



Material: FTL137

General Description

137 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 mooring & towing winches
Miscellaneous industrial devices

Bonding

137 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) 0.52
Dynamic TBD

Recommended operating range

Pressure: Dynamic 0.10 – 1.00 MPa
Static 0.10 – 2.50 MPa

Max. rubbing speed 25 m/s
Max. continuous temperature 140 0C
Max. intermittent temperature 180 0C
Max. temperature 200 0C

Size range

Roll

Lengths: 10.0 metres (nominal) below 15 mm thick
7.5 metres (nominal) 15 mm thick & above

Maximum width: 330 mm below 15 mm
510 mm 15 mm thick & above

Thickness range: 3.2 to 20.0 mm

Sheets

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

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 & Mechanical Properties

Density 1.06 - 1.20 g/cc

Ultimate tensile strength: 47 - 75 MPa

Ultimate compressive strength: 100 – 155 MPa

Resistance to compression: 2.5% 3.3 MPa
(Test thickness 9.5mm) 5.0% 6.8 MPa
7.5% 9.7 MPa

Ultimate shear strength: 13 – 25 MPa

Rivet holding capacity 61 – 100 MPa



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