Friction Components and Systems Ltd

Product Data Sheet

Material Type: ZAGOLD

General Description

ZAGold is a solid woven friction material. It is based on yarn spun from a blend of glass and synthetic fibres together with a fine brass wire to enhance its strength and heat dissipation properties. The impregnant has been specially developed to give it good frictional properties combined with a fair degree of flexibility. It has a high coefficient of friction with excellent fade resistance and is particularly suitable for mine winder brakes. 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 & 180°C for sufficient time for the heat to penetrate the fabric. This material is not suited to operate in oil-immersed conditions.

Applications

Industrial drum and band brake linings
Mine winder brake linings

Bonding

ZAGOLD 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.

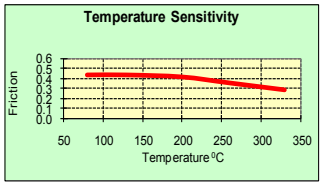
Availability

- Roll
  - Length 10.0 Metres
  - Width 20 to 510mm
  - Thickness range 12.7mm to 25.4mm
- Sheet size 1000mm x 660mm x 12.7mm to 25.4mm thick
- Linings and special shapes available on request

TECHNICAL DATA

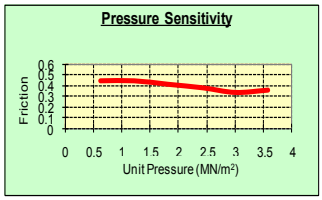
Friction

μ for design purposes :	
Static (cold)	0.45
Dynamic (dry)	0.43



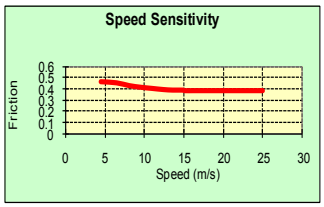
Recommended Operating Range

Pressure	
Dynamic	0.1—1.00 MPa
Static	0.1 - 2.50 MPa
Max. rubbing speed	25 m/s
Max. continuous temperature	150°C
Max. intermittent temperature	200°C
Max. temperature	300°C



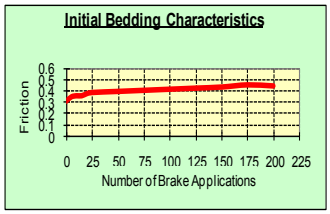
Test Conditions

Application Speed	15m/s
Clamping pressure	0.61 MN/m³ (88.5 ibf/in²)
Average temperature	Initial Bedding 140°C
Average temperature	Pressure Sensitivity / Speed Sensitivity 80°C



PHYSICAL PROPERTIES

Density	1.45-1.65 g/cc
Ultimate tensile strength	60 MPa
Ultimate compressive strength	100 MPa
Resistance to compression (Test thickness 9.5mm)	2.5% 5.17 MPa 5.0% 13.62 MPa 7.5% 22.75 MPa



Ultimate shear strength	16 MPa
Rivet holding capacity	135 MPa
(All physical properties shown	above are all mean values)

The information supplied in this data sheet is believed to be accurate and reliable, and was obtained by scientific and laboratory testing. However, since actual conditions of use are largely outside the control of FRICTION COMPONENTS AND SYSTEMS LTD, it is suggested that this material be thoroughly tested and its suitability for use be determined before final acceptance.

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