Friction Components and Systems Ltd

Product Data Sheet

Material Type: D3501

General Description

D3501 is a rigid moulded friction material, having a non asbestos basis of synthetic fibres in random dispersion. It contains no metallic particles and is grey in colour. D3501 possesses high physical strength, and facings can be gear-cut on either the inside or outside circumference if required. It has a medium coefficient of friction with low wear and is suitable for use at medium to heavy duty levels . Although not affected physically by minor oil contamination this material is unsuitable for operating under oil-immersed conditions.

Applications

- **Clutches for marine gearboxes**
- **Steering clutches**
- **Clutches for machine tools, presses and other industrial plant and machinery**
- **Miscellaneous industrial devices**

Bonding

D3501 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. Care should be taken to ensure that the temperature to which the material is to be subjected does not exceed the recommendations of the adhesive manufacturer.

Mating Surface

A good quality, fine grained, pearlitic cast iron or cold rolled steel with a Brinell hardness of 200. Cast steels are not recommended.

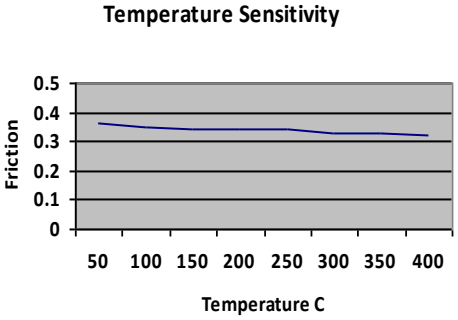
Availability

Sheets 660 x 530mm up to 65mm thick
Sheets 900 x 700mm up to 25.4mm thick
Special shapes on request
Discs on request

TECHNICAL DATA

Friction

μ for design purposes : Static (cold) 0.34
Dynamic 0.32



Recommended Operating Range

Pressure : Dynamic 70-700kN/m² (10-100l bf/in²)
Static 70-2,410kN/m² (10-350l bf/in²)
Max. rubbing speed 18 m/s (60 ft/s)
Max. continuous temperature 175°C
Max. intermittent temperature 225°C
Max. temperature 300°C

PHYSICAL PROPERTIES

Density	1.95 g/cc
Ultimate tensile strength	27.6 MN/m² (4,000 lbf/in²)
Ultimate shear strength	23.4 MN/m² (3,400 lbf/in²)
Ultimate compressive strength	138 MN/m² (20,000 ibf/in²)
Ultimate crossbreak strength	69.0 MN/m² (10,000 ibf/in²)
Thermal conductivity	0.9 W/m °C

(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 our control, it is suggested that this material be thoroughly tested and its suitability for use be determined before final acceptance.

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