

Friction Components and Systems Ltd

Product Data Sheet-

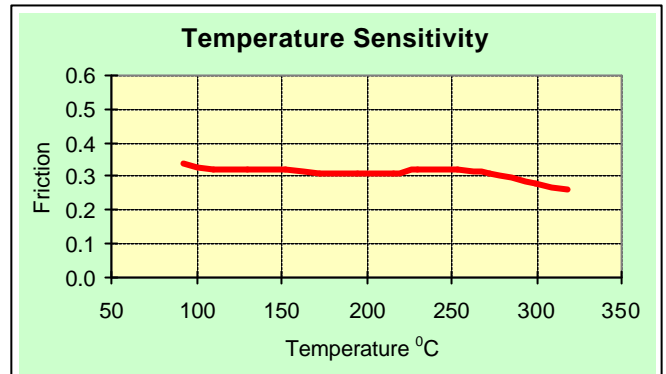
Material Type: **D3501**

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.



Application

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.

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.

TECHNICAL DATA

Friction

μ for design purposes:

Dry	Static (cold)	0.34
	Dynamic	0.32

Recommended operating range

Pressure

Dynamic	70 - 700 kN/m ² (10 - 100 lbf/in ²)
Static	70 - 2410 kN/m ² (10 - 350 lbf/in ²)

Max. rubbing speed	18 m/s (60 ft/s)
Max. continuous temperature	175 °C
Max. intermittent temperature	225 °C
Max. temperature	300 °C

Size range

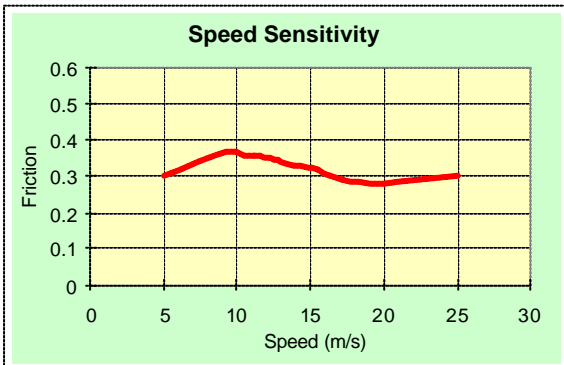
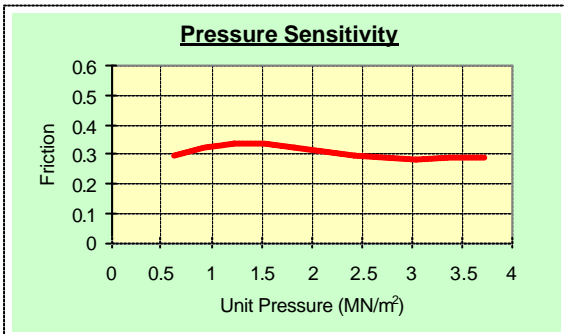
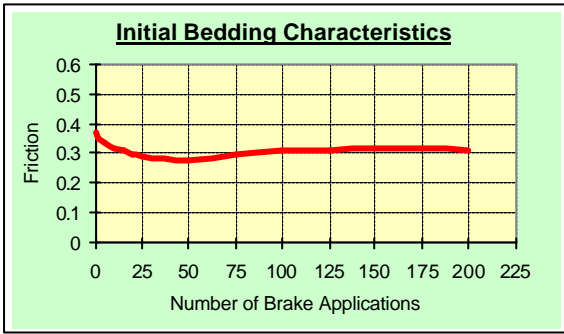
Sheets

750 x 750 up to 55mm thick
558 x 558 up to 65mm thick

Discs

Maximum diameter - 819mm x 34mm thick.

MATERIAL DESCRIPTION					AVAILABILITY			
Non-Asbestos	Woven	Moulded	Metallic	Oil-Resistant	Roll	Sheet	Disc	Lining
*		*				*	*	



Test Conditions

Temperature Sensitivity (see above)

Application speed 15 m/s
 Clamping pressure 0.61 MN/m² (88.5 lbf/in²)
 Temperatures ranging from 50 to 350°C in steps of 25°C

Initial Bedding

Application speed 15 m/s
 Clamping pressure 0.61 MN/m² (88.5 lbf/in²)
 Average Temperature 140°C

Pressure Sensitivity

Application speed 15 m/s
 Average temperature 80°C

Speed Sensitivity

Clamping pressure 0.61 MN/m² (88.5 lbf/in²)
 Average temperature 80°C

Physical Properties

Density - 1.90 g/cc

Ultimate tensile strength - 28.0 MN/m² (4000 lbf/in²)

Ultimate shear strength - 23.0 MN/m² (3400 lbf/in²)

Cross-break strength - 69.0 MN/m² (10,000 lbf/in²)

Thermal conductivity - 0.9 W/m °C

(All the 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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