

Friction Components and Systems Ltd

Product Data Sheet

Material Type: D3714

General Description

D3714 is a rigid moulded, non asbestos, friction material which includes a proportion of brass chippings blended with a selection of synthetic fibres and a specially developed resin binder.

D3714 combines a medium friction coefficient with good resistance to fade and a low rate of wear. It machines well and discs can readily be gear cut for use in multi-plate clutches.

This material is suitable for use either dry or in oil immersed applications

Application

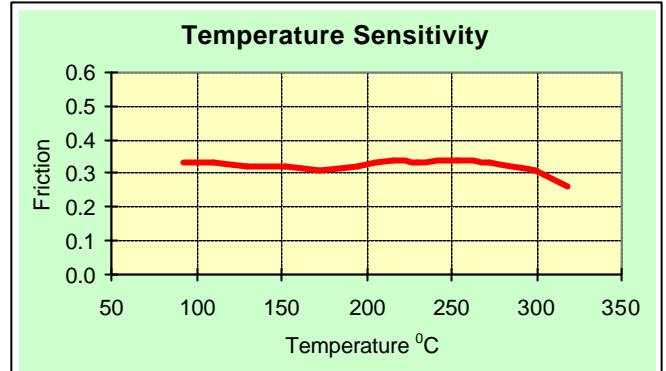
Clutches for marine gearboxes
Steering clutches
Clutches for machine tools, presses and other industrial plant and machinery.
Miscellaneous industrial devices

Bonding

D3714 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

m for design purposes:

Dry	Static (cold)	0.35
Dynamic		0.33
In oil	Static (cold)	0.10
Dynamic		0.09

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 x 3.2 to 19mm thick
432 x 406 x 3.2 to 25.4mm thick

Discs

Maximum diameter 495 x 22mm thick

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

Test Conditions

Temperature Sensitivity (see over)

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

1.9 g/cc

Ultimate tensile strength - 26.2 MN/m² (3,800 lbf/in²)

Ultimate compressive strength -155 MN/m² (22,500 lbf/in²)

Ultimate shear strength - 24.0 MN/m² (3,480 lbf/in²)

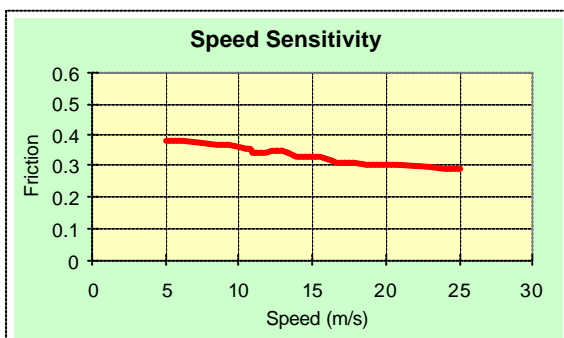
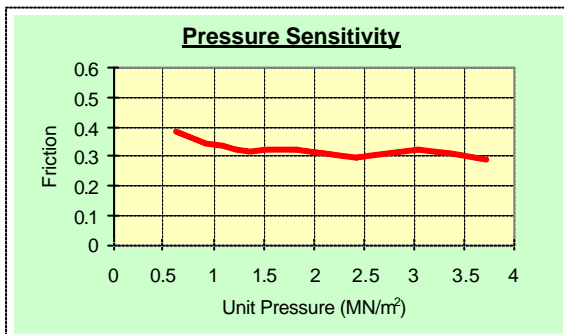
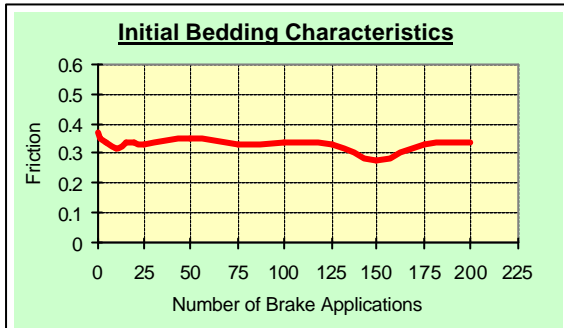
Rivet holding capacity - 148 MN/m² (21,500 lbf/in²)

Thermal conductivity - 0.486 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



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