

Friction Components and Systems Ltd

Product Data Sheet

Material Type: D3707

General Description

D3707 is a material which in many respects is similar to **Dynamex D3714**, although marginally higher in friction. It is rigid moulded, light brown in colour and contains a proportion of brass chipping to enhance its heat dissipation properties. This is a non asbestos material, based on a blend of synthetic fibres with a specially developed resin binder.

D3707 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

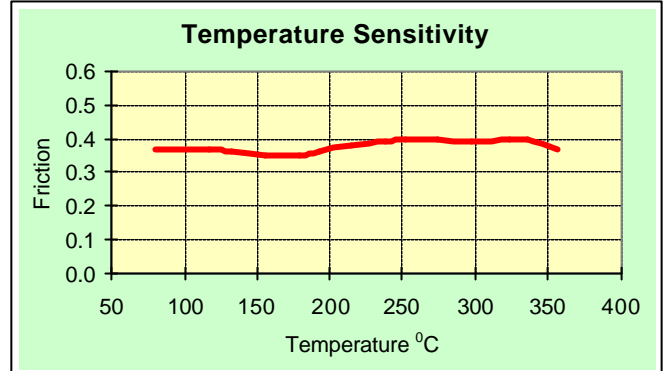
Clutches for marine gearboxes
Steering clutches
Clutches for machine tools, presses and other industrial plant and machinery.
Miscellaneous industrial devices

Bonding

D3707 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

/// for design purposes:

Dry	Static (cold)	0.36
	Dynamic	0.38
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 bf/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 19 thick
432 x 406 x 3.2 to 22 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 - 178 g/cc

Ultimate tensile strength - 32.0 MN/m² (4,641 lbf/in²)

Ultimate compressive strength - 159 MN/m² (23,061 lbf/in²)

Ultimate shear strength - 18.5 MN/m² (2,683 lbf/in²)

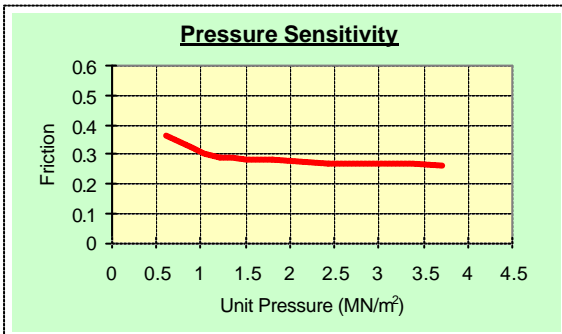
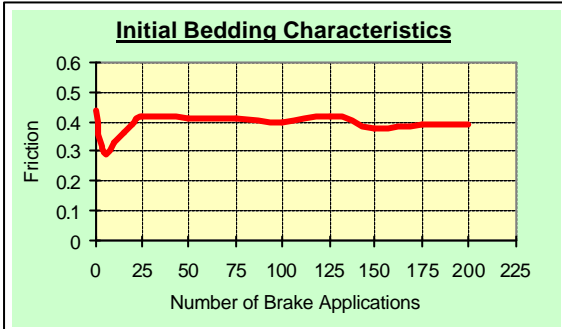
Rivet holding capacity - 151.6 MN/m² (22,000 lbf/in²)

Thermal conductivity - 0.488 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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