

Friction Components and Systems Ltd

Product Data Sheet Material Type: D3921

General Description

D3921 is a rigid moulded friction material, light green in colour, and having a non-asbestos basis of short steel filaments in a random dispersion to enhance its heat dissipation properties and strength. It incorporates a blend of carefully selected friction modifiers and a binder which has been specially developed to enhance its properties. Whilst not affected physically by slight oil contamination, this material is not intended to operate in oil. **D3921** is also available as semi-cured, semi-flexible roll although in this form it is known by the reference **D#5N#**. Information on how to convert D3920 into D3921 is available on request.

Applications

Industrial drum and band-brake linings
Crane and excavator brake and clutch linings
Miscellaneous industrial devices

Bonding

D3921 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.

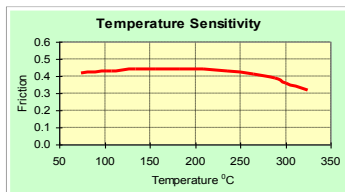
Availability

- **Roll**
 - Length 5M
 - Width 20 to 330mm
 - Thickness range 3.2mm to 12.7mm
- Sheet size 660mm x 330mm x 3.2 up to 12.7mm thick
- Sheet size 660mm x 530mm x above 12.7mm to 32.0mm thick
- Special shapes and discs on request

TECHNICAL DATA

Friction

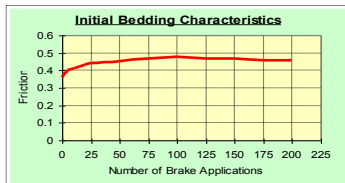
μ for design purposes :



Static (cold) 0.38
Dynamic 0.42

Recommended Operating Range

Pressure



Dynamic 70-860 kN/m²
Static 70-2,410 kN/m²
25 m/s
175°C
225°C
300°C

Max. rubbing speed

Max. continuous temperature

Max. intermittent temperature

Max. temperature

Test Conditions

Application Speed

Clamping pressure

Average temperature

Average temperature

15m/s
0.61 MN/m² (88.5 ibf/in²)
Initial Bedding 140°C
Pressure Sensitivity / Speed Sensitivity 80°C

PHYSICAL PROPERTIES

Density

Ultimate tensile strength

Ultimate compressive strength

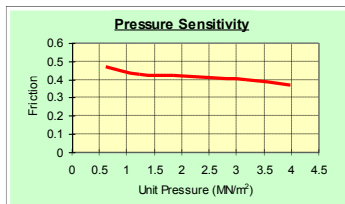
Ultimate shear strength

Rivet holding capacity

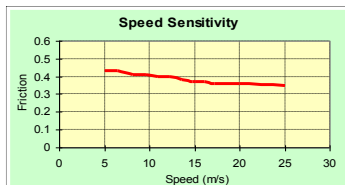
Thermal Conductivity

Hardness (Shore D)

(All physical properties shown above



2.30 g/cc
15.0 MN/m² (2,177 ibf/in²)
93.0 MN/m² (13,520 ibf/in²)
12.0 MN/m² (1,750 ibf/in²)



86.0 MN/m² (12,500 ibf/in²)
1.034 W/m²C
75

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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