Friction Components and Systems Ltd

Product Data Sheet

Material Type: D2013

General Description

D2013 is a rigid moulded non asbestos material, which incorporates a blend of selected friction modifying agents, together with a specially developed binder system. It also includes a proportion of steel filaments in random dispersion. D2013 has been produced with the specific aim of presenting good static frictional characteristics, whilst displaying a high stable dynamic coefficient. Good resistance to both fade and wear have also been achieved and the material is suitable for use at medium and heavy duty levels. Although D2013 is not affected physically by slight oil contamination, it is not suitable for use immersed in oil.

Applications

- **Industrial disc brakes**
- **High temperature pads for wind turbine applications**
- **Disc brakes for off-highway equipment**
- **Miscellaneous industrial devices**

Bonding

D2013 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.

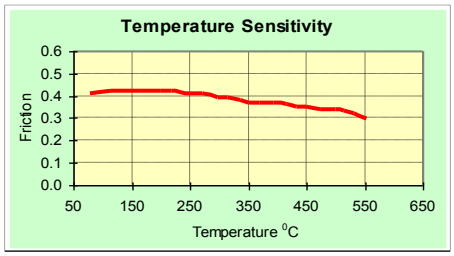
Availability

Integrally moulded pads onto steel backplates
Sheets 420 x 420mm up to 25.4mm thick
Special shapes on request

TECHNICAL DATA

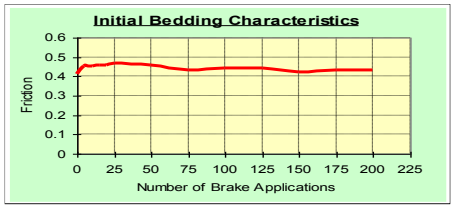
Friction

μ for design purposes : Static (cold) 0.40
Dynamic 0.42



Recommended Operating Range

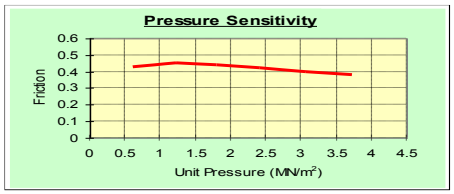
Pressure : Dynamic 0.35-5.2 MN/m² (50-750l bf/in²)
Max. rubbing speed 25 m/s
Max. continuous temperature 225°C
Max. intermittent temperature 350°C
Max. temperature 550°C



TEST CONDITIONS

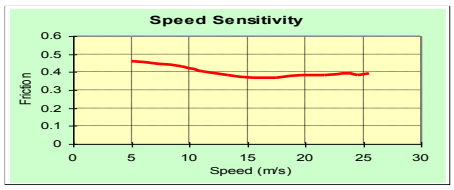
Temperature Sensitivity
Application Speed 20 m/s
Clamping pressure 1.22MN/m²(177 lbf/in²)
Temperatures ranging from 50 to 550°C in steps of 25°C

Initial Bedding
Application speed 15 m/s
Clamping pressure 1.22 MN/m² (177 lbf/in²)
Average Temperature 150°C



Pressure Sensitivity
Application speed 15 m/s
Average temperature 80°C

Speed Sensitivity
Clamping pressure 1.22MN/m² (177 lbf/in²)
Average temperature 150°C



PHYSICAL PROPERTIES

Density 3.3 g/cc
Compressive Strength 134.41 MN/m² (19,500 psi)
Ultimate shear strength 14.1MN/m² (2,050 lbf/in²)
Thermal Conductivity 1.03 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 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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