



FLEXIBLE FRICTION MATERIALS

Material	Description
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232AF	Medium friction level material for light and medium duty applications.
242OR	Medium high friction level material for light and medium duty applications. Suitable for both wet and dry applications.
GGW	High friction level material for heavy-duty applications. Consistent friction level over a wide range of temperatures.
GGA	Medium high friction level material made with high level of Aramid fibers. Aramid material known for toughness, smoothness and long wear.

Please contact The Rowland Company for more information on friction materials not listed above.

Product Data Sheet

Brake Lining Material: 232AF/HDM

PRODUCT DESCRIPTION: Scan-Pac is the only remaining manufacturer in the world of sheeter flexible molded lining. All other flex-mold is either extruded or profile calendered, meaning extremely low tensile strength both longitudinal and latitudinal. This in turn means low or no rivet holding strength, frequent in-service cracking and in the case of facings very low burst strength. Our sheeter materials are all strong, tough, smooth, and consistent.

APPLICATION: All of our flexible sheeter products which include 232AF, HDM, 242OR & GGA are intended for light and medium duty and wherever a flexible material is desired or required. 232AF is a medium friction material as is HDM, which is exactly the same as 232AF except is has a slight cure. This reduces flexibility somewhat, but is helpful on applications where the lining can not be run in properly

PHYSICAL PROPERTIES

Size and Tolerance Data

Rolls – Thickness: 1/32” to 1/2”
- Width: 1” to 13”

+ .000/- .020”
To 6” wide +/- 1/32”
6” to 10” +1/32”-1/16”
Over 10” +1/32”-1/8”

Flat Sheets – Thickness: 1/32” to 1/2”
- Sheet Size

+/- .010”
20” X 60”
30” X 30”

Facings – Thickness: 1/32” to 1/2”
- OD to 12”
- OD over 12”
- ID to 12”
- ID over 12”

+/- .010”
+/- 1/32”
+/- 1/16”
+1/16”-.000
+1/8”-.000

MECHANICAL PROPERTIES

Specific Gravity (SAE J380)
Shore D Hardness (ASTM D2240-68)
Tensile Strength, psi (ASTM D638)

1.55-1.75
55-65
1000psi min.

FRICITION PROPERTIES 232AF/HDM

Coefficient of Friction (SAE J661)

Normal .45

Hot .39

See Note 1

Wear Rate, by weight (SAE J661) .018

Friction Code FF

Recommended Operating Limits

Max. Rubbing Speed 5000 fpm

See Note 2

Max. Drum Temp. 500°F

°F for Constant Operation

See Note 2

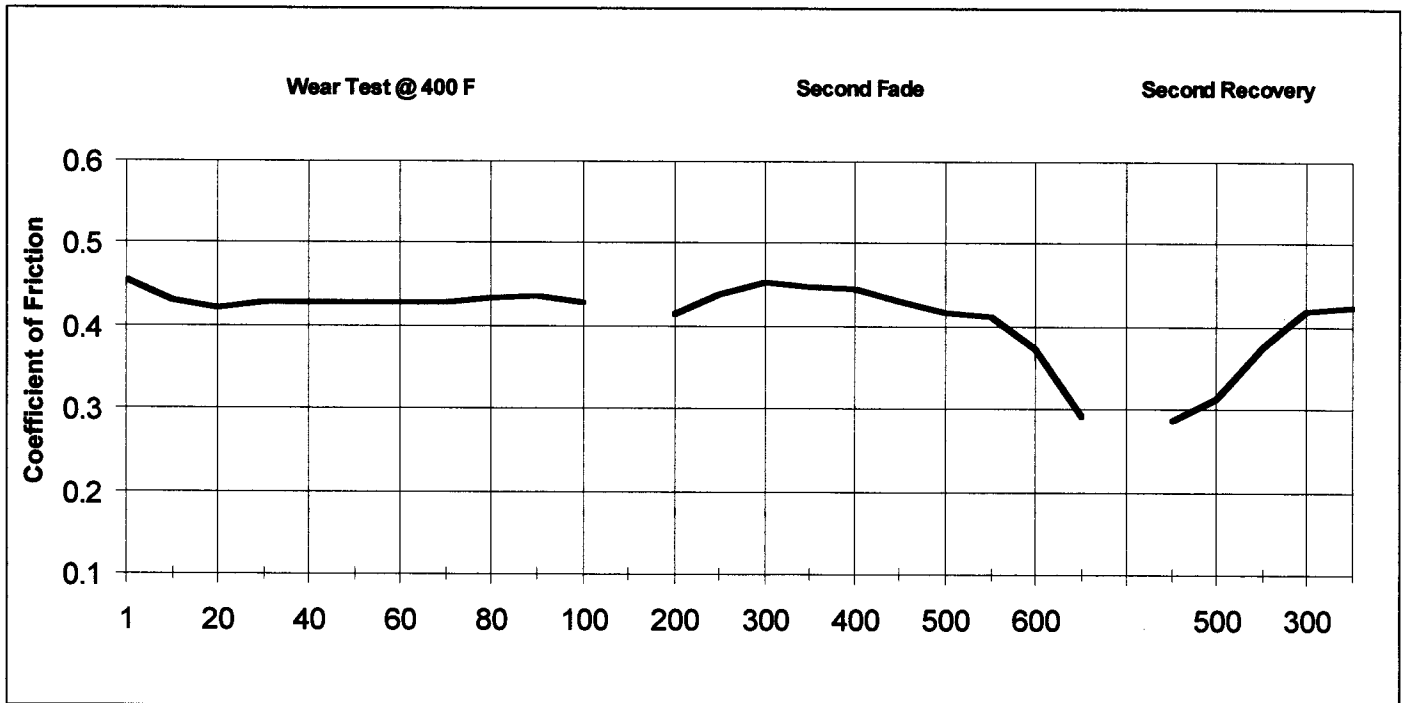
Max. Pressure 100psi

See Note 2

Note 1. – Friction values shown are for guide purposes only since values deviate with changes in temperature, pressure and speed. Practical design should include a 25 to 50 percent safety factor.

Note 2. – Rubbing speed, drum temperature, and pressure are directly related. Changing any one value will change the others. The values shown represent typical conditions, but are not the ultimate limits of the material.

SAE J661a Test Curves



Product Data Sheet

Brake Lining Material: **242OR**

PRODUCT DESCRIPTION: Scan-Pac is the only remaining manufacturer in the world of sheeter flexible molded lining. All other flex-mold is either extruded or profile calendered, meaning extremely low tensile strength both longitudinal and latitudinal. This in turn means low or no rivet holding strength, frequent in-service cracking and in the case of facings very low burst strength. Our sheeter materials are all strong, tough, smooth, and consistent.

APPLICATION: All of our flexible sheeter products are intended for light and medium duty and wherever a flexible material is desired or required. 242OR is a medium high friction material suitable for both wet and dry applications. It is also available diamond grooved on request.

PHYSICAL PROPERTIES

Size and Tolerance Data

Rolls – Thickness: 1/32” to 1/2”
- Width: 1” to 13”

+ .000/- .020”
To 6” wide +/- 1/32”
6” to 10” +1/32”-1/16”
Over 10” +1/32”-1/8”

Flat Sheets – Thickness: 1/32” to 1/2”
- Sheet Size

+/- .010”
20” X 60”
30” X 30”

Facings – Thickness: 1/32” to 1/2”
- OD to 12”
- OD over 12”
- ID to 12”
- ID over 12”

+/- .010”
+/- 1/32”
+/- 1/16”
+1/16”-.000
+1/8”-.000

MECHANICAL PROPERTIES

Specific Gravity (SAE J380)
Shore D Hardness (ASTM D2240-68)
Tensile Strength, psi (ASTM D638)

1.66-1.86
56-68
1500psi min.

FRICITION PROPERTIES 242OR

Coefficient of Friction (SAE J661)

Normal .42

Hot .40

See Note 1

Wear Rate, by weight (SAE J661) .020

Friction Code FF

Recommended Operating Limits

Max. Rubbing Speed 5000 fpm

See Note 2

Max. Drum Temp. 500°F

°F for Constant Operation

See Note 2

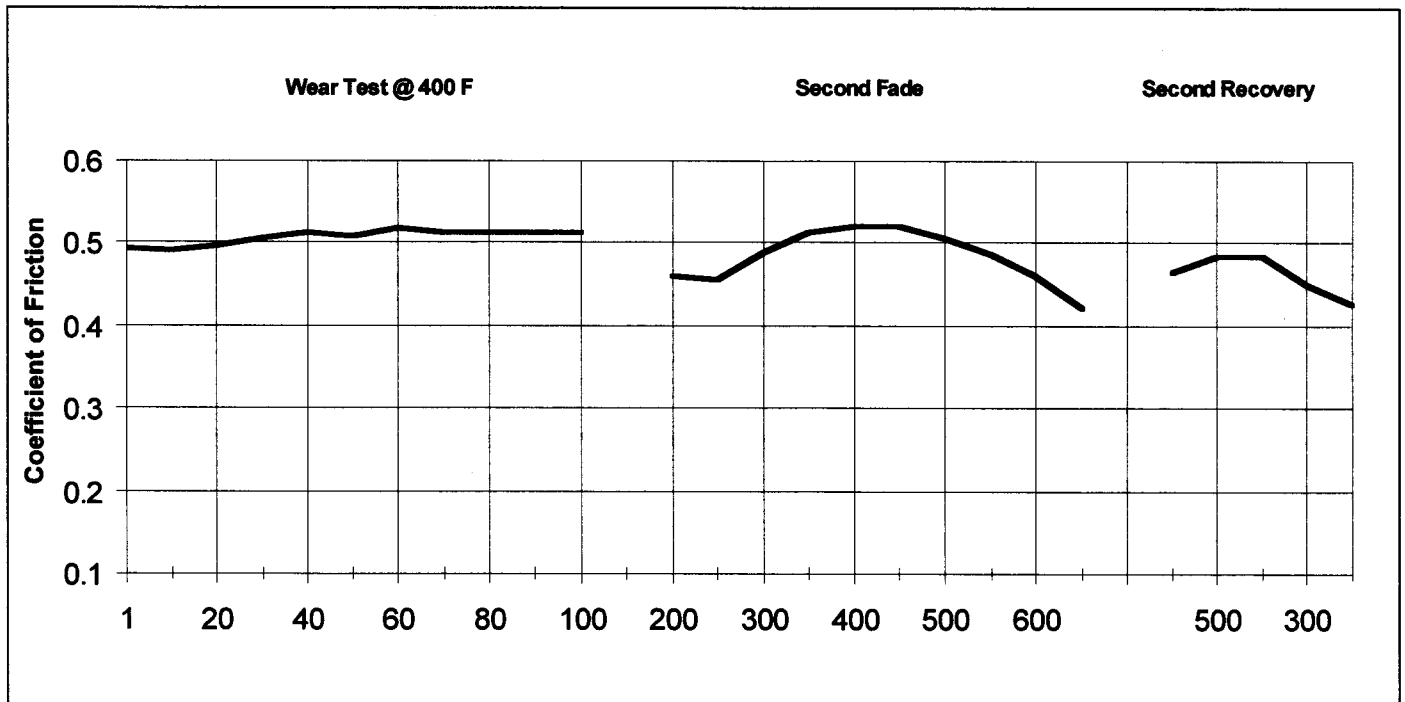
Max. Pressure 100psi

See Note 2

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Note 2. – Rubbing speed, drum temperature, and pressure are directly related. Changing any one value will change the others. The values shown represent typical conditions, but are not the ultimate limits of the material.

SAE J661a Test Curves



Product Data Sheet

Brake Lining Material: Green Gripper Woven (GGW)

PRODUCT DESCRIPTION: GGW is rated as a heavy-duty woven product for industrial applications. Its unique fiber blend and specially formulated saturant produce a superior non-asbestos woven product as indicated by the SAE J661a test data. Notable on this curve are the consistent friction level and the excellent fade resistance. Recovery is immediate and complete...and the wear rate is good for woven materials.

APPLICATION: GGW exhibits high friction under a wide range of temperatures. GGW can be used on dry band brakes for industrial use where medium to high friction is required. Typical use is in draw works, hoist or winch service, and holding brakes. The woven construction of non-asbestos fibers provides maximum resilience for excellent drum contact. The product is available in roll form, flat sheet, and custom shapes.

PHYSICAL PROPERTIES

Standard Slab Sizes, maximum W X L

Width & Length (Flat Sheet)

26"-27" X 27"

Width & Length (Roll)

3/4"-13" Wide X 300" Long

Thickness (variable slab and custom size)

.125" To 1.25"

MECHANICAL PROPERTIES

Specific Gravity (SAE J380)

1.18-1.28

Tensile Strength, psi (ASTM D638)

2500psi min.

FRICION PROPERTIES GGW

Coefficient of Friction (SAE J661)

Normal .55

Hot .45

See Note 1

Wear Rate, by weight (SAE J661)

.035 max.

Friction Code

GG

Recommended Operating Limits

Max. Rubbing Speed

5000 fpm

See Note 2

Max. Drum Temp.

550°F

°F for Constant Operation

See Note 2

Max. Pressure

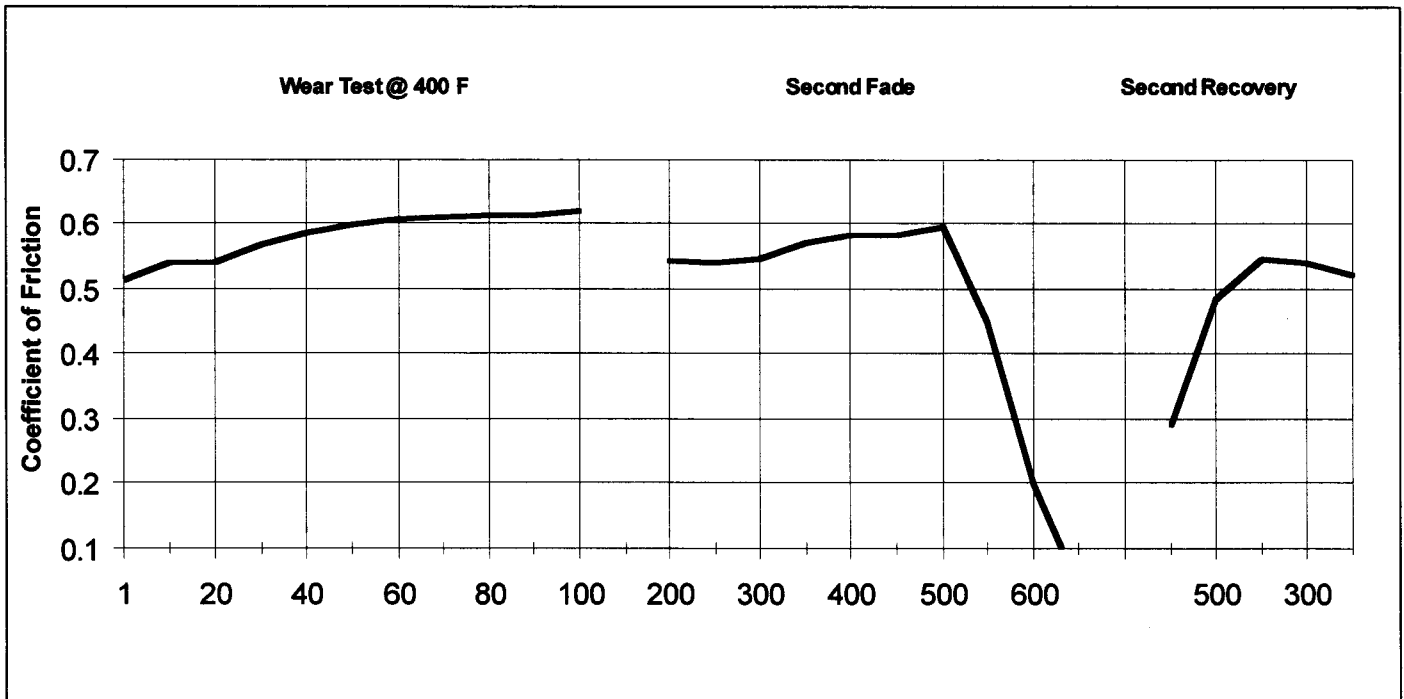
200psi

See Note 2

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SAE J661a Test Curves



Product Data Sheet

Brake Lining Material: GGA Uncured (Semi-Flexible)

PRODUCT DESCRIPTION: Available in flexible rolls and flexible flatsheet, Green Gripper Aramid-uncured is a very high Aramid content material, known for its toughness, smoothness and long wear.

APPLICATION: Compounded for use on tensioning devices in difficult applications. GGA has proved to be the finest high Aramid material available for use on both clutches and brakes. Can be used on both wet and dry applications. Can be easily bonded to other materials or metal for increased thickness and for custom shapes.

PHYSICAL PROPERTIES

Tolerance and Size Data

Rolls – Thickness: 1/32” to 3/8”

Width : 1” to 13”

+ .000/- .020”
to 6” wide +/- 1/32”
6” to 10” +1/32”, -1/16”
Over 10” +1/32”, -1/8”

Flat Sheets – Thickness: 1/32” to 3/8”

Sheet Size:

+/- .010”
20” X 60”
30” X 30”

Facings – Thickness: 1/32” to 3/8”

OD to 12”

OD over 12”

ID to 12”

ID over 12”

+/- .010”
+/- 1/32”
+/- 1/16”
+1/16”, -.000
+1/8”, -.000

MECHANICAL PROPERTIES

Specific Gravity (SAE J380)

1.60-1.80

Shore D Hardness (ASTM D2240-68)

60-70

Tensile Strength, psi (ASTM D638)

2000psi min.

FRICITION PROPERTIES GGA Uncured

Coefficient of Friction (SAE J661)

Normal	.45
Hot	.36
See Note 1	

Wear Rate, by weight (SAE J661)

.008

Friction Code

FF

Recommended Operating Limits

Max. Rubbing Speed 5000 fpm

See Note 2

Max. Drum Temp. 500°F

°F for Constant Operation

See Note 2

Max. Pressure 100psi

See Note 2

Note 1. – Friction values shown are for guide purposes only since values deviate with changes in temperature, pressure and speed. Practical design should include a 25 to 50 percent safety factor.

Note 2. – Rubbing speed, drum temperature, and pressure are directly related. Changing any one value will change the others. The values shown represent typical conditions, but are not the ultimate limits of the material.

SAE J661a Test Curves

