Frenos Sauleda s.a.
science friction

Barri del migdia S/N - E 08396
Sant Cebrià de Vallalta (Barcelona - Spain)
sauleda@frenossauleda.com
Tel. (+34) 93 763 11 20 Fax (+34) 93 763 10 61

ID Material	N 3
Responsable	R. Antich
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MC3

MC3 is a rigid, semi-metallic, moulded material. It is a resin based material, and it uses rubber powder as a linkage, along with friction modifier agents, mineral fibers and fine copper shavings to enhance its strength. It has high temperature dissipation capacity from the operating surface. MC3 has a high and very stable friction coefficient, and excellent resistance to fading. MC3 is a fully cured material and is suitable for bonding & riveting.

Material data

Friction properties

Static Friction Coefficient (@15bar, from the box)	0.60±0.05 μ
Static Friction Coefficient (@15bar, 100ºC)	0.65±0.05 μ
Dynamic Friction Coefficient (10bar, 10m/s)	0.62±0.05
Wear Rate (@10bar, 15m/s)	40 (at 150 ºC)
Tº Fading (@10bar, 10m/s)	>400 °C

Physical properties

Hardness (DIN53505)	88±5 Shore-D
Specific Gravity (ASTM D792)	2±0.10 gr/cm3
Thermal Conductivity (ASTM E1952)	0.31±0.01 W/m°K

Mechanical properties

Tensile Strength (ASTM D638)	15±1 N/mm²
Compressive Strength (ISO 844:2014)	126±5 N/mm²
Shear Modulus (ASTM D2344-00)	2154±100 N/mm²
Poison coefficient (ASTM D638)	0.23±0.03
Young Modulus (ASTM D638)	5300±100 N/mm²

Recommended Working Values

Tº Max. Continuous Operation	400 °C
Tº Max. Intermittent Operation	500 °C

Material type

Rigid

Appearance / Formats



Applications

Forging machinery · Heavy duty static applications · Heavy-duty industrial machinery · Machinery Mining industries · Punch-die press blocks · Ring segments

Price Level

€ € €

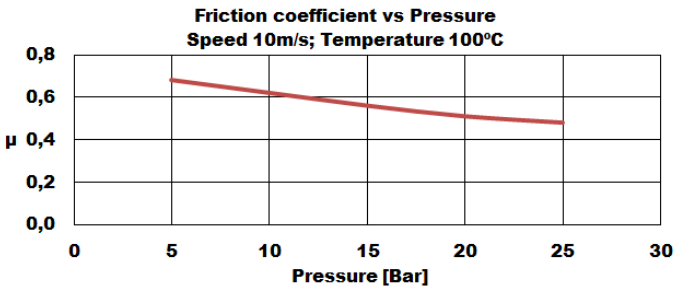
Reach (EC)1907/2023 - RoHS 2015/863/EU

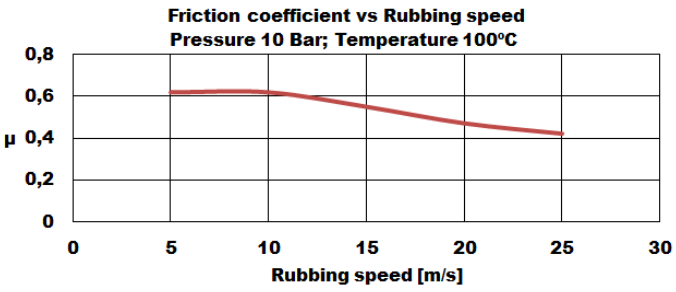
Compliance

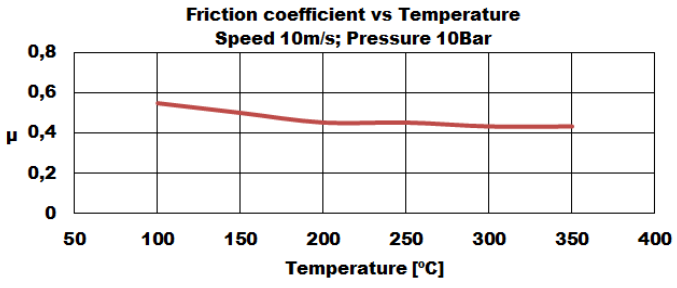
Others

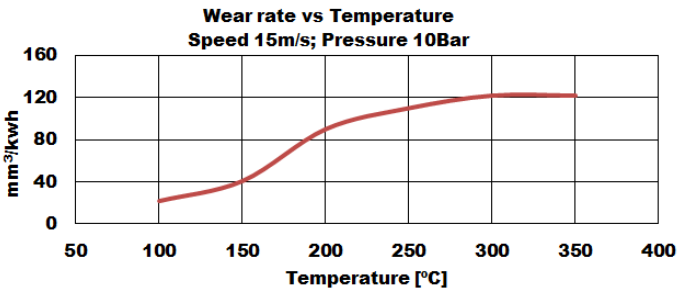
Recommended Mating Surface	Perlitic cast iron, hardness HB150-200
Recommended Adhesives	Thermosetting adhesive
Oil Resistant	Yes

Charts









Rubbing speed, temperature and pressure are related. Changing any values will change other. The values shown represent typical conditions, but are not ultimate limits of the material.