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science friction

ID Material: 66
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SF-MC2

SF-MC2 is a high performance metal free material, with a high friction coefficient. It has a high percentage of aramid fibre. It can be considered as an alternative for sintered metal materials and offers many advantages. It resists high energy inputs and is suitable for both dry and oil-immersed applications. It is not abrasive to the counter material, and it's noiseless while operating. It resists high surface pressures. The wear rate is low even at high temperatures. SF-MC2 is available in thicknesses from 0.4mm to 7.5mm. Similar to SF-BU but with higher friction coefficient.

Material data

Friction Properties (according graphics)

Static Friction Coefficient (15bar, from box):	0.40±0.05	μ
Static Friction Coefficient (15bar, 100ºC):	0.45±0.05	μ
Dynamic Friction Coefficient:	see charts	
Wear Rate:	see charts	
Tº Fading:	>400	°C

Physical properties

Hardness (DIN53505):	85±5	Shore-D
Specific Gravity (ASTM D792):	1.30±0.05	gr/cm3
Thermal Conductivity (ASTM E1952):	0.25±0.01	W/m°K

Mechanical properties

Tensile Strength (ASTM D638):	70±5	N/mm^2
Compressive Strength (ISO 844:2014):	306±10	N/mm^2
Burst Resistant (200 x 137 x 3,5) 200°C:	18200±100	RPM
Poisson Coefficient (ASTM D638):	0.27±0.03	
Young Modulus (ASTM D638):	7260±100	N/mm^2

Recommended Working Values

T° Max. Continuous Operation:	360	°C
T° Max. Intermittent Operation:	400	°C

Material type : Paper Friction

Appearance / Formats

Bonded   Gear   Rings   Sheets   Washers

Applications

Car / motorcycle competition clutches - Clutch buttons - Heavy vehicle clutches - Micellaneous industrial brakes / clutches

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

Friction coefficient vs Pressure
Speed 10m/s; Temperature 100ºC

Friction coefficient vs Rubbing speed
Pressure 10 Bar; Temperature 100ºC

Friction coefficient vs Temperature
Speed 10m/s; Pressure 10Bar

Wear rate vs Temperature
Speed 15m/s; Pressure 10Bar

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.