

ID Material: 10  
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# FGR

FGR is developed for industrial applications, it is a rigid and molded green friction material. The most known characteristics of this material it's hardness and mechanical strength. The material comprises mainly of phenolic resins with NBR bonding system, short fibres, friction modifiers, metal particles and fillers. FGR is fully cured and is suitable for bonding and riveting.

## Material data

### Friction Properties (according graphics)

Static Friction Coefficient (15bar, from box):	0.50±0.05	μ
Static Friction Coefficient (15bar, 100°C):	0.52±0.05	μ
Dynamic Friction Coefficient:	see charts	
Wear Rate:	see charts	
T° Fading:	>350	°C

### Physical properties

Hardness (DIN53505):	87±5	Shore-D
Specific Gravity (ASTM D792):	1.85±0.05	gr/cm3

### Mechanical properties

Tensile Strength (ASTM D638):	15.2±2	N/mm <sup>2</sup>
Compressive Strength (ISO 844:2014):	160±5	N/mm <sup>2</sup>
Shear Modulus (ASTM D2344-00):	2070±100	N/mm <sup>2</sup>
Poisson Coefficient (ASTM D638):	0.26±0.03	
Young Modulus (ASTM D638):	5220±100	N/mm <sup>2</sup>

### Recommended Working Values

T° Max. Continuous Operation:	250	°C
T° Max. Intermittent Operation:	350	°C

Material type : Rigid material

### Appearance / Formats



Gear

Machined

Blocks

Bonded

### Applications

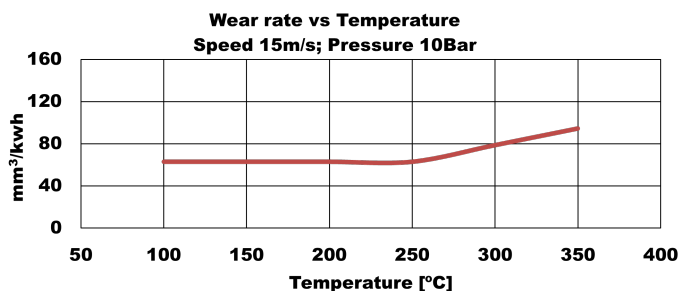
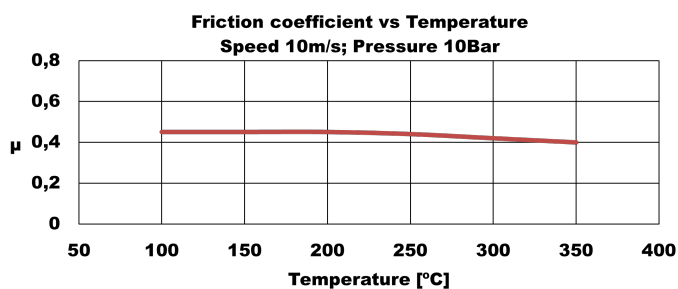
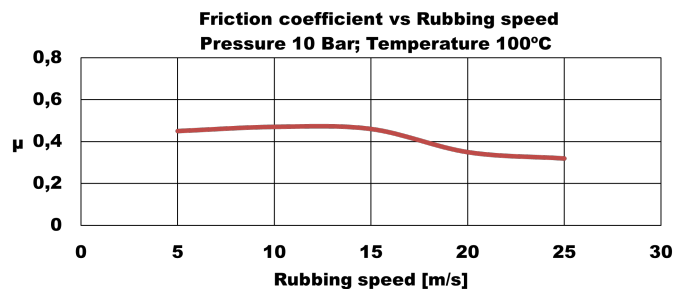
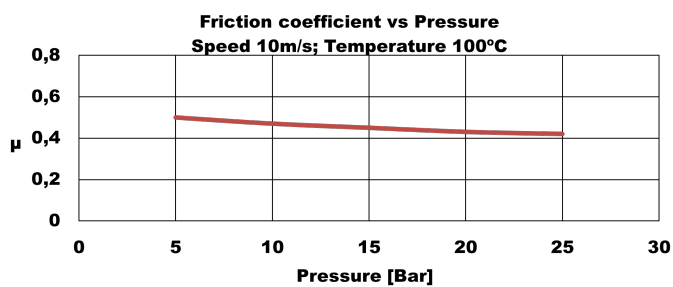
Agricultural and building machinery - Brake blocks - Brake pads - Callipers for industrial applications - Cones segments for machinery - Gear discs for industrial devices - Miscellaneous industrial brakes / clutches

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



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.