

FRICITION MATERIAL JT6500

Material description:

The asbestos-free friction material is made on the basis of synthetic resins, synthetic rubber, metal fillers in the form of powder and steel fibers, mineral fibers, friction coefficient corrections and stabilizers. The use of aramid and carbon fiber in the lining guarantees the maintenance of high thermal and chemical resistance and resistance to wear of the lining and the friction partner (coupling disc).

This material is made by hot pressing technique. Upon completion of the process of hot pressing, friction elements are subject to a special thermal treatment that stabilizes friction and physical and chemical properties. Brake pads are subject to surface hardening at a temperature of 600°C (scorching), which accelerates the process of hardening and preparing for working conditions.

Material structure and colour: black, homogeneous, with visible solid fragments of steel and brass wool.

Material operational properties: high and stable friction coefficient $\mu=f(T,p,V)$, low wear of the material and raceway, does not cause noise during braking. A high capacity of the material to remove heat during braking. A minimal amount of semi-metallic elements.

Scope of application:

Brake pads: passenger vehicles, goods vehicles, trucks, wind farms, construction machines, agricultural machines, motor scooters, motorbikes.

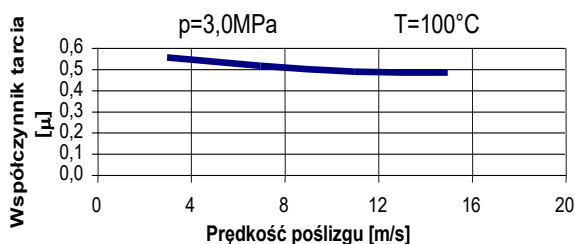
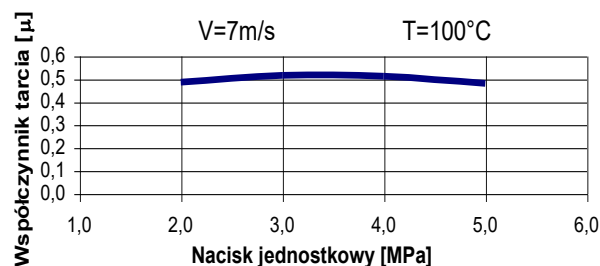
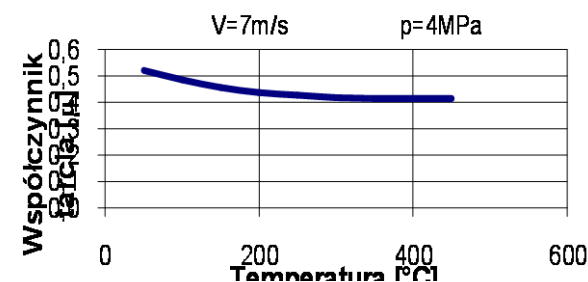
Technical specification:

Physical and mechanical properties	Testing standard	Testing parameters	Unit	Typical value
Density	PN-92/C-82055/10	20 °C	g/cm ³	2,7
Hardness H	PN-93/C-89030/01	20 °C	MPa	78,0

Recommended working conditions		Chemical resistance	
Unit pressure	1 – 6 MPa	to brake fluid	good
Slip speed	up to 40 m/s	to diesel oil	good
Working temperature - momentary	500 °C	to petrol	good
Working temperature - long-term	400 °C	to solid grease	good
Antifriction material	Zl 250	to gear oil	good

This material is not designed to work in oil.

Frictional properties $\mu=f(T,p,V)$ under laboratory conditions



Frictional properties $\mu=f(T,p,V)$ were determined on a testing stand in accordance with standard testing procedures.



WEAR TEST

friction material: JT6500

Testing parameters on a testing stand:

After 500 times of braking for the temperatures of 60, 100, 200, 300, 350 °C at a constant pressure of $p = 2$ MPa

Actual moment of inertia: 16 kgm^2

Initial rotational speed : 1075 min⁻¹

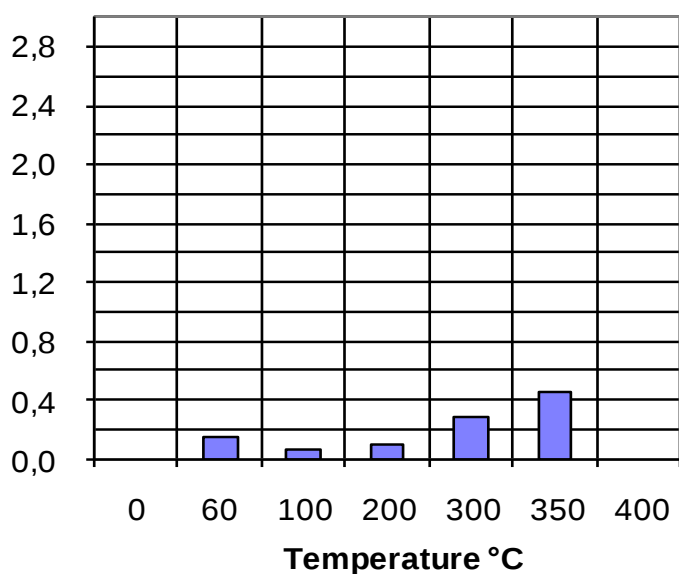
Brake caliper : Bendix III - Polonez

Diameter of wheel cylinder: $\varnothing 48 \text{ mm}$

Brake disc: $\varnothing 227 \times 10 \text{ mm}$

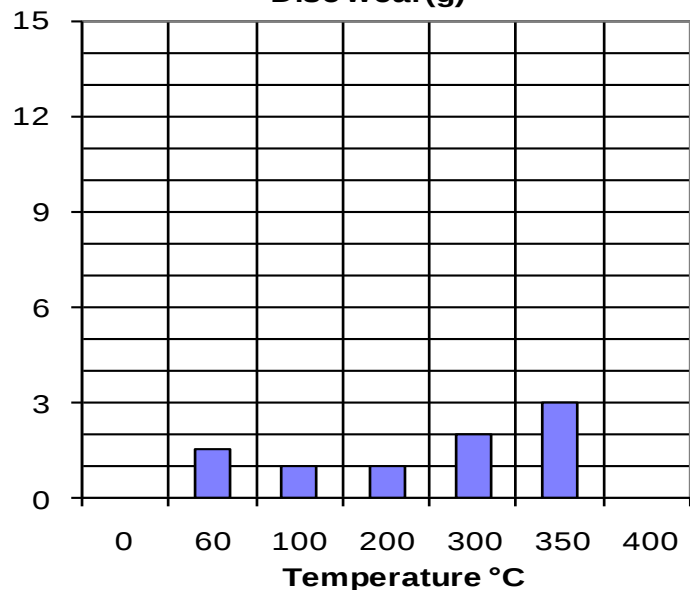
Average friction radius: 0.09 m.

Lining wear (mm)



Lining wear	
°C	mm
60	0,15
100	0,06
200	0,1
300	0,29
350	0,45
Σ	1,05

Disc wear(g)



Disc wear	
°C	g
60	1,5
100	1
200	1
300	2
350	3
Σ	8,5

