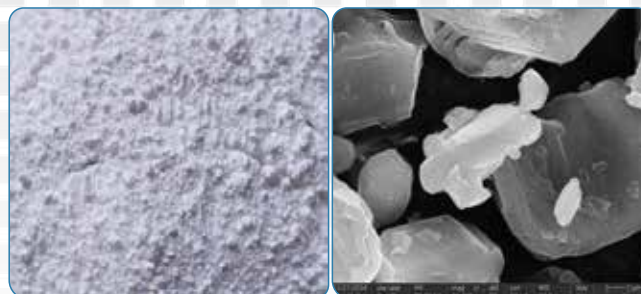


Potassium Titanate Flaky Crystal

Name: Potassium Titanate Flaky Crystal

Application: Friction industry

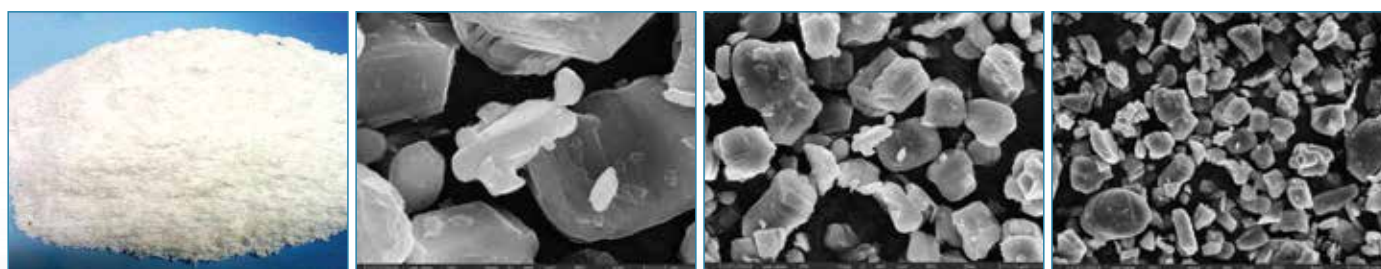


Product Introduction:

Potassium Titanate Flaky Crystal is a cationic layered compound of $K_2MgTi_4O_{10}$. It is white powder in the macroscopic view and a flaky crystal in the microscopic view. It is an inorganic crystal which can stay stable at high temperatures with characteristics of high strength and high elastic modulus. The Potassium Titanate Flaky Crystal is able to maintain strength and stability in high temperature environment, so it is widely used in friction materials, plastics, coatings and other materials. Moreover, the hardness is low, the Potassium Magnesium Titanate is very suitable to be used in the environment where the pair needs to be protected from damage.

Data Sheet

Item No	Chemical Formula	Appearance	Microscopic Appearance	Tap Density (g/cm ³)	Loose Density (g/cm ³)	Moisture (%)	Diameter (μm)	PH	Mohs Hardness	Heat Resistance (°C)	Melting Point (°C)
NP-TP20	$K_2MgTi_4O_{10}$	White Powder	Flaky Oblate Crystal	1.2-1.9	0.7-1.0	≤1.0	5-50	9-12	4	1200	>1300
NP-TP8	$K_2MgTi_4O_{10}$	White Powder	Flaky Oblate Crystal	3-3.3	1-1.3	≤1.5	5-20	9-11	4	1200	>1300



Advantages:

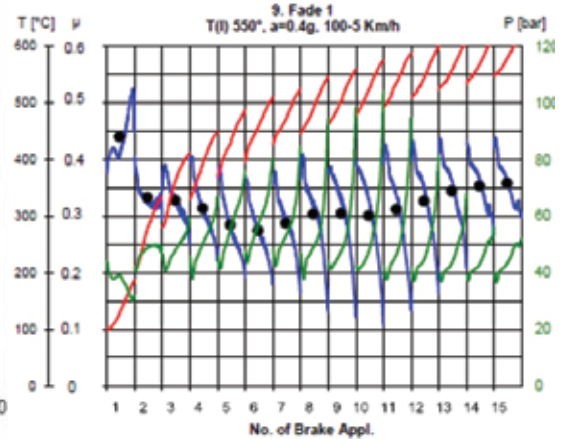
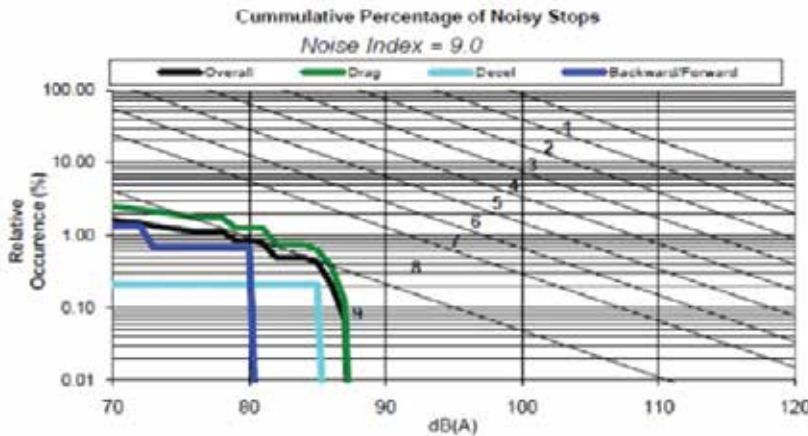
- 1) Improve Friction Performance
- 2) Stable Friction Coefficient
- 3) High temperature resistance
- 4) Good NHV performance (Reducing Friction Noise)

Potassium Titanate Flaky Crystal

Application:

Friction industry

Used in automotive ceramic brake pads, train brake shoes and clutches.....etc.



Frequency Range	Threshold	Number of Noisy Stops (per frequency range / apply type)				Percentage (%) Noisy Stops (per frequency range / apply type)			
		Overall	Drag	Decel	Back/Fwd	Overall	Drag	Decel	Back/Fwd
2 kHz to 17 kHz	>70 dB(A)	23	20	1	2	1.6%	2.5%	0.2%	1.3%
	>80 dB(A)	12	10	1	1	0.8%	1.3%	0.2%	0.7%
2 kHz to 4 kHz	>70 dB(A)	0	0	0	0	0.0%	0.0%	0.0%	0.0%
	>80 dB(A)	0	0	0	0	0.0%	0.0%	0.0%	0.0%
4 kHz to 6 kHz	>70 dB(A)	2	0	0	2	0.1%	0.0%	0.0%	1.3%
	>80 dB(A)	1	0	0	1	0.1%	0.0%	0.0%	0.7%
6 kHz to 10 kHz	>70 dB(A)	20	19	1	0	1.4%	2.4%	0.2%	0.0%
	>80 dB(A)	11	10	1	0	0.8%	1.3%	0.2%	0.0%
10 kHz to 14 kHz	>70 dB(A)	1	1	0	0	0.1%	0.1%	0.0%	0.0%
	>80 dB(A)	0	0	0	0	0.0%	0.0%	0.0%	0.0%
14 kHz to 17 kHz	>70 dB(A)	0	0	0	0	0.0%	0.0%	0.0%	0.0%
	>80 dB(A)	0	0	0	0	0.0%	0.0%	0.0%	0.0%
		Total # of Stops				1430	798	482	150

Characteristic values μ	Avg.	Min.
Char. Value (3) $\mu_{0.05}$	0.43	
Speed/Pressure (4.3) $\mu_{1/25}$	0.37	
Speed/Pressure (4.5) μ_{max}	0.31	
Char. Value (5) $\mu_{0.05}$	0.34	
40°C Brake Appl. (6) $\mu_{1/25}$	0.46	
Motorway Appl. 2 (7) μ_{max}	0.32	
Char. Value (8) $\mu_{0.05}$	0.38	
Fade 1 (9) $\mu_{1/25}$	0.28	
Char. Value (10) $\mu_{0.05}$	0.44	
Temperature (12) $\mu_{1/25}$	0.38	
Char. Value (13) $\mu_{0.05}$	0.50	
Fade 2 (14) $\mu_{1/25}$	0.39	
Char. Value (15) $\mu_{0.05}$	0.50	
	μ_{max}	0.41
	μ_{min}	0.28