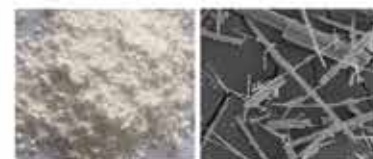




Calcium Sulfate Fiber



- **Produce Name:** Calcium Sulfate Fiber (Gypsum Fiber)
- **Item No.:** NP-HF06
- **Application:** Dedicated for Middle, high-end brake pads formulation

Data Sheet

Formula	Purity (%)	Whitness (%)	Partial Shape	Loose Density (g/cm ³)	Moisture (%)	Length (μm)	Diameter (μm)	L/D	PH Value	Mohs Hardness	Heat Resistance (°C)
CaSO ₄	≥95	≥90	Rod-like Fiber	0.15-0.3	≤1.0	10-300	1-15	10-100	7±0.5	3	1000

- **Package:** 12.5kgs/bag (Inner plastic film, kraft paper outside)

NP-HF06 HAS THREE POINTS IN APPLICATION OF MEDIUM AND HIGH END BRAKE PADS FORMULATIONS

1 The necessity for technical personnel to improve the original formula (defects, high cost.) needs to be optimized

- On the basis of the original basic formula, the adding proportion of resin, reinforced fiber and filler is adjusted according to the adding amount of calcium sulfate fiber. The recommended proportion is 7-15% (7-15% of the overall formula weight).

2 NP-HF06 vs "LF".

2.1 NP-HF06 comparative test data in the NAO formula of passenger car disc

	Formulation 1	Formulation 2	Formulation 3
Basic Test	NP-HF06	NP-HF06 + LF	LF
Additive amount	4%	4%+6%	6%

Conclusion: The wear result of brake pad: the wear loss of F3>F1>F2, wear loss of F2 formula is the lowest, the wear of F1 formula is less than F3, and Dynamometer test indicates the performance of NHV is improved effectively when braking.

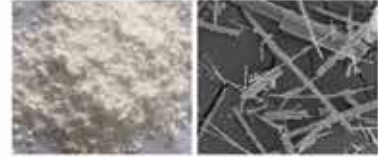
2.2 NP-HF06 comparative test data on commercial passenger vehicle brake pads

	F1	F2	F3
Basic Test	NP-HF06	NP-HF06 + LF	LF
Additive amount	6%	6%+8%	8%

Conclusion: the wear result of brake disc: the wear loss of F3>F1>F2, wear loss of F2 formula is the lowest, the wear of F1 formula is less than F3, and Dynamometer test test shows that the performance of NHV is improved effectively when braking.



Calcium Sulfate Fiber

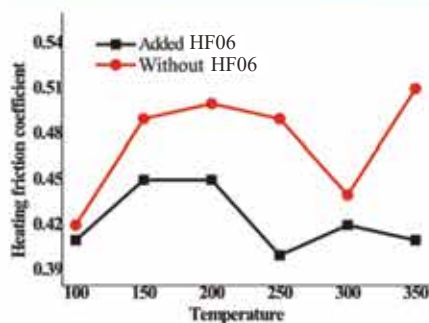


2.3 Verified by several groups of experiments, calcium sulfate fiber has excellent performance when combined with LF in NAO formula of medium-high-end car disc and low-gold (low - steel) formula of commercial vehicle disc, and it is suggested to be popularized and used.

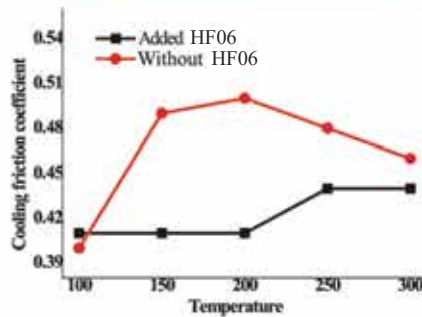
3 NP-HF06 working with Fibrous potassium titanate/Titanate Flaky crystal

Our customers have undergone many experiments and market verification in brake pads formulation. NP-HF06 can be combined with Fibrous potassium titanate/Titanate Flaky Crystal. That is, Mixing NP-HF06 with Fibrous potassium titanate/Titanate Flaky Crystal, the new brake pads still has excellent comprehensive performances, reducing the cost obviously and improving brake pads market competitiveness.

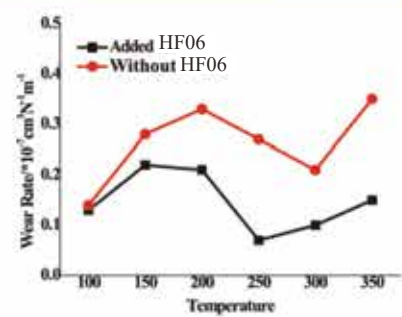
Reference Datas: Calcium sulfate fiber can stabilize friction coefficient and reduce wear rate.



a) Heating friction coefficient—temperature



b) Cooling friction coefficient—temperature



(c) Wear rate—temperature

PS: Automobile Disc Pads, HF06 dosage:12%

Example: Properties of Ceramic Disc with HF06

Temperature /°C	Heating Friction Coefficient	Cooling Friction Coefficient	Average Thickness Difference /mm	Wear Rate /10 ⁻⁷ cm ³ N ⁻¹ m ⁻¹	Average Friction /N
100	0.34	0.39	21	0.14	399
150	0.35	0.40	21	0.13	420
200	0.37	0.37	17	0.10	440
250	0.36	0.39	13	0.08	439
300	0.38	0.42	23	0.13	464
350	0.46		51	0.25	542

PS: Resin 7%, HF06 15%, Ceramic Fiber 6%, Other components 72%.

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