ZHONGYAOTECH
XINGTAI ZHONGYAO CHEMICAL

PRODUCT BROCHURE
2026 / 01



FRICTION MATERIAL GRADE

MgO for Friction Materials.

Thermal stabiliser for brake pads and clutch facings — holds the friction coefficient steady when the surface passes 400 °C.

MGO	FINENESS	CAO	MOHS
≥ 96.0 %	325 mesh	≤ 1.0 %	6.0

Fade is not a friction problem. It is a **binder** problem — and MgO is what keeps the binder **from collapsing**.

400–600 °C

WORKING RANGE

Stable coefficient where phenolic binders begin to degrade.

2–6 wt%

TYPICAL DOSAGE

Above this, the friction film becomes friable and wear rises.

20–30%

LONGER SERVICE

Reported by customers against unbuffered compounds.

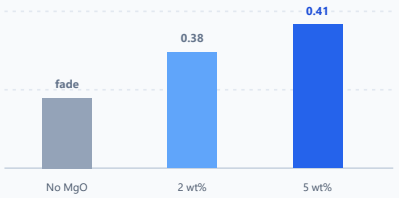
01 — MECHANISM

Holding the pad together at temperature.

Phenolic binders degrade above roughly 400 °C, releasing acidic by-products that accelerate further breakdown. Magnesium oxide absorbs those species and buffers the local chemistry.

The residual magnesia also acts as a mild abrasive, adjusting the balance between adhesive and abrasive wear — which is how a formulator tunes the coefficient without changing the binder.

Compare. Coarse grades flow better in a dry mix; fine grades give a more uniform friction film. Both are supplied against the same chemistry.



COEFFICIENT OF FRICTION VS TEMPERATURE — INDICATIVE

PROCESS



Friction stability — Coefficient of friction vs temperature — indicative

MGO CONTENT	FINENESS	CAO
≥ 96.0 %	**325 mesh**	**≤ 1.0 %**
vs ≥ 90 %	vs 200–325	vs ≤ 1.5 %

02 — SPECIFICATION

Controlled batch to batch.

Parameter	Standard value	Method
MgO Content	**≥ 96.0%**	Batch COA
Particle Size	**325 mesh**	Batch COA
CaO	**≤ 1.0%**	Batch COA
Hardness (Mohs)	**6.0**	Batch COA

Test support

We supply against SAE J661 and SAE J2522 programmes run by customer laboratories. Formulation starting points are available on request.

SUPPLY

Packaging	**25 / 1 000 kg**
Minimum order	**1 t**
Lead time	**3–7 days**
Grade code	**MgO-Friction**

CAS 1309-48-4 · Batch COA with every shipment. TDS and SDS on request.

INCOMING

Ore assay

Every lot screened for Fe, Ca, Si before calcination.

IN PROCESS

Activity + LOI

Sampled during production against the batch target.

BEFORE SHIPMENT

Full COA

Complete release testing, third-party reports on request.

03 — APPLICATIONS

Where it is specified.



01

Disc brake pads

Fade resistance



02

Commercial vehicle linings

Thermal load



03

Clutch facings

Wear and noise



04

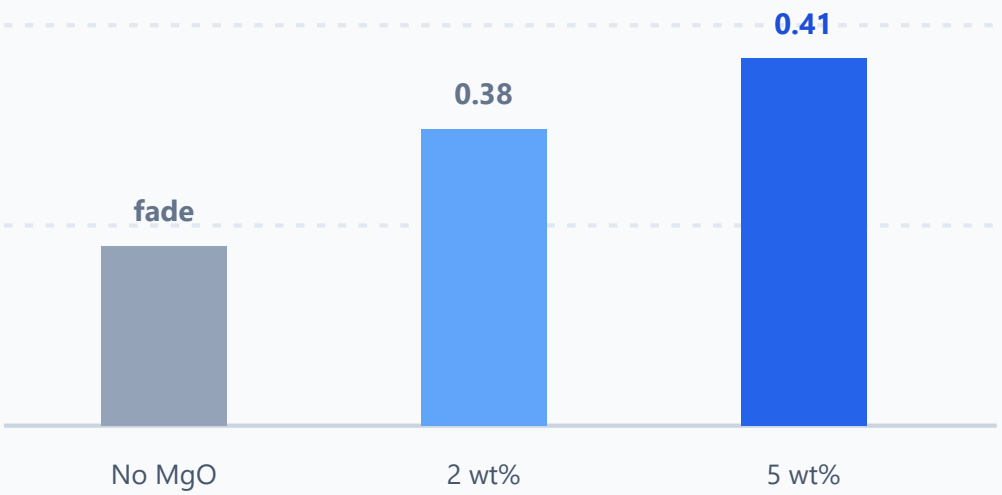
Rail brake blocks

Consistent braking power

Dosage and loading figures are starting points for formulation trials. Final performance depends on the complete compound and test conditions.

04 — PERFORMANCE

Loading against performance.



COEFFICIENT OF FRICTION VS TEMPERATURE — INDICATIVE

Property	This grade	Standard MgO
MgO content	**≥ 96.0 %**	≥ 90 %
Fineness	**325 mesh**	200–325
CaO	**≤ 1.0 %**	≤ 1.5 %
Use	**Friction compounds**	General

PACKAGING

25 kg PE-lined PP woven bag, palletised on request.

1 000 kg jumbo bag for bulk compounding lines.

LOGISTICS

20' FCL load	**20–24 t**
Port of loading	**Tianjin / Qingdao**
Incoterms	**FOB / CIF / CFR**
HS code	**2519.90**

05 — SUPPLY

Batch traceable. Documented every time.

Every shipment carries a batch-specific COA. TDS, SDS and REACH statements are issued on request. Production is ISO 9001:2015 certified.

50,000 t
ANNUAL CAPACITY

50+
EXPORT COUNTRIES

1 t
MINIMUM ORDER

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Specifications are typical values and do not constitute a batch release certificate. Confirm acceptance criteria against the batch COA and the TDS in force at the time of order.

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