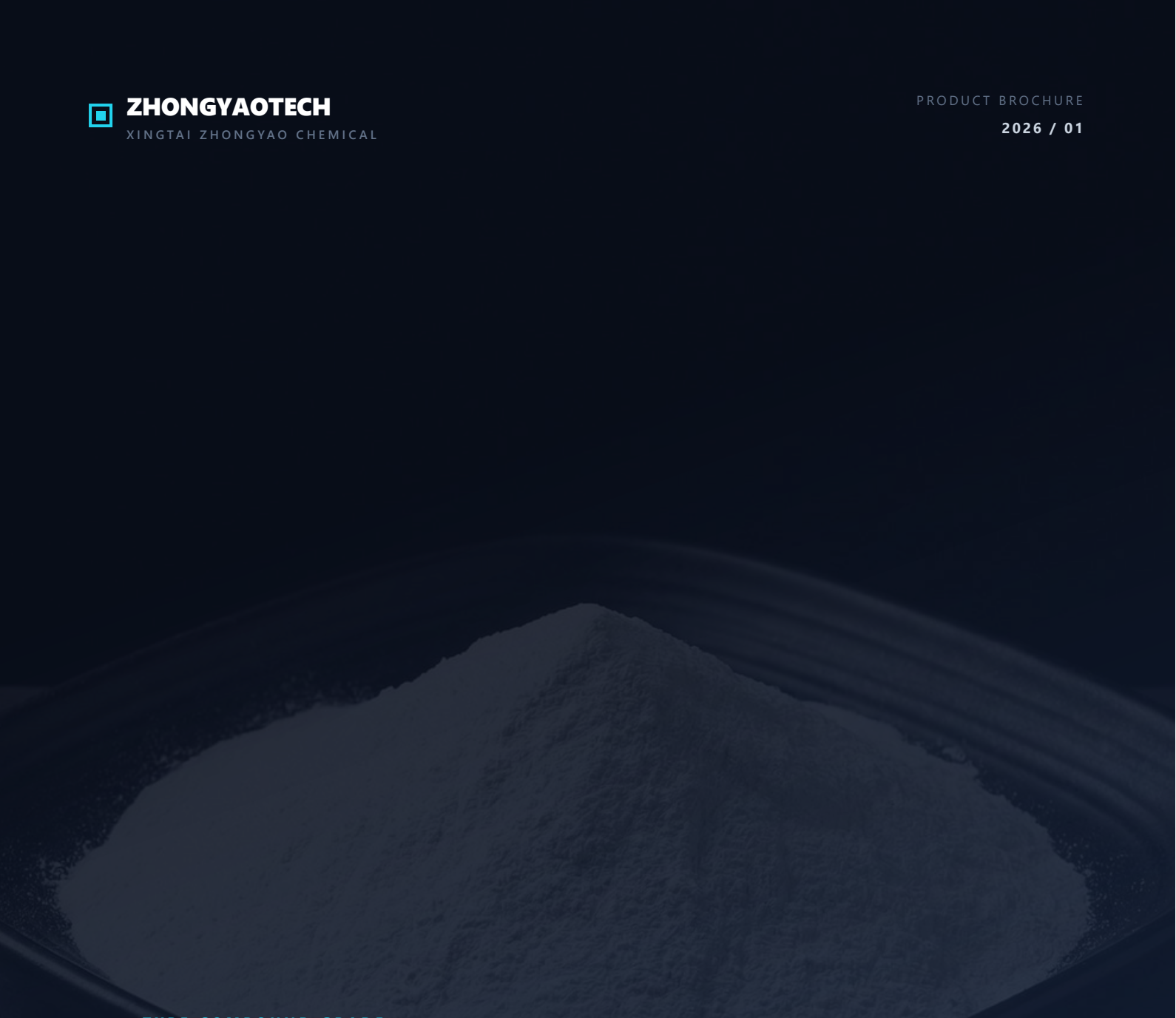
ZHONGYAOTECH
XINGTAI ZHONGYAO CHEMICAL

PRODUCT BROCHURE
2026 / 01



TYRE COMPOUND GRADE

MgO for Tires.

Acid acceptor and cure activator for sidewall and tread compounds — 20–30 % faster vulcanisation without scorch risk.

MGO	ACTIVITY	D50	DOSAGE
≥ 96 %	110–140 s	2–4 µm	3–5 phr

The press cycle is set by the **slowest** reaction. MgO takes that bottleneck **out of the mould**.

20–30%

SHORTER CURE

Measured reduction in press time at constant hardness.

<5 phr

TYPICAL DOSAGE

Higher loadings rarely improve the balance.

150 °C

HEAT RESISTANCE

Dimensional stability maintained in service.

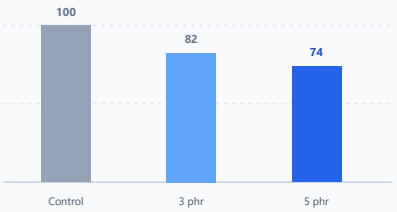
01 — MECHANISM

What it does inside the compound.

During mixing the magnesia neutralises acidic species and protects the accelerator system from premature cross-linking. During cure it participates in the vulcanisation network, raising cross-link density.

The result is a compound that stays safe at mixing temperature and cures faster in the press — two effects that look contradictory but come from the same acid acceptance.

Compare. Grades are matched to the compound type: NR/BR sidewalls usually take a medium-activity grade, performance treads a slightly higher one.



AGAINST AN UNBUFFERED CONTROL — INDICATIVE

PROCESS

Mixing → Cure → Service

Cure time reduction — Against an unbuffered control — indicative

ACTIVITY
110–140 s
vs 150–250 s

DOSAGE
3–5 phr
vs 2–4 phr

MAIN EFFECT
Cure activation
vs Acid acceptance

02 — SPECIFICATION

Controlled batch to batch.

Parameter	Standard value	Method
MgO Content	**≥ 94.0%**	Batch COA
Surface Area	**30-50 m^2/g**	Batch COA
Residue on Sieve	**≤ 0.01%**	Batch COA
Moisture	**≤ 0.5%**	Batch COA

Dosage

Start at 3 phr and adjust against scorch time and cross-link density. Above 5 phr the balance usually shifts toward hardness at the expense of flex fatigue.

SUPPLY

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

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

Tyre sidewall

Scorch safety and heat ageing



02

Tread compounds

Cross-link density



03

Retread compounds

Adhesion and ageing



04

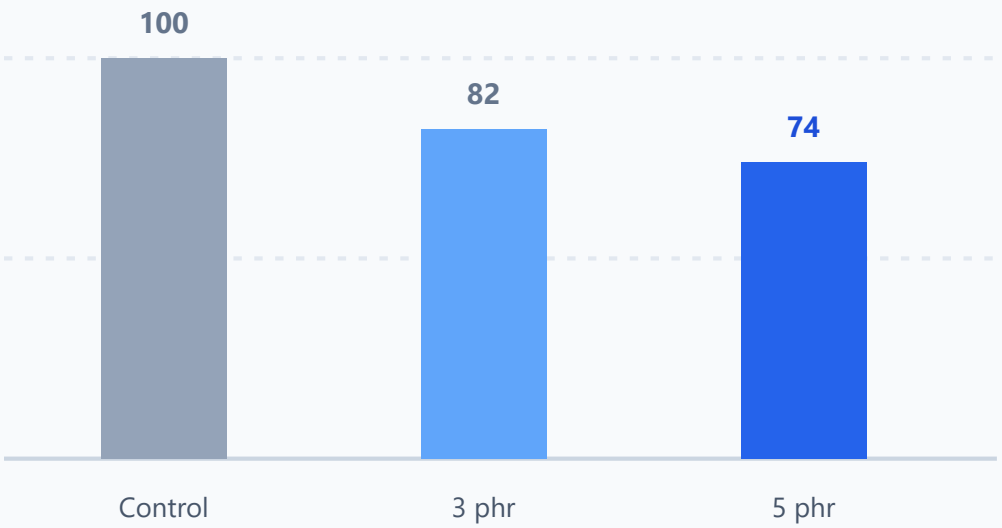
Custom compounding

Formulation support

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.



AGAINST AN UNBUFFERED CONTROL — INDICATIVE

Property	This grade	Light MgO
Activity	**110–140 s**	150–250 s
Dosage	**3–5 phr**	2–4 phr
Main effect	**Cure activation**	Acid acceptance
Use	**Tyre compounds**	General rubber

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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