



Wedge

PRODUCT CATALOGUE · 2026 EDITION

WedgeMICA

Mica insulation boards, sheets, tubes and machined parts for high-voltage and high-temperature electrical insulation — from switchgear to induction and arc furnaces.

Up to 1100 °C

Up to 23.6 kV/mm

UL 94 V-0

Muscovite · Phlogopite · Synthetic

Machined to drawing

THE MATERIAL

Insulation that keeps working where heat, arcing and voltage meet.

Mica is a naturally layered silicate mineral with very high dielectric strength, high arc resistance and stability at temperatures far above the limit of any organic laminate. WedgeMICA products convert muscovite, phlogopite and synthetic mica into engineered boards, sheets, rolls and tubes — bonded with silicone resin for heat duty — and machine them into finished insulation parts.

1100 °C

Temperature index, WMB-S1100 synthetic grade

23.6 kV/mm

Minimum dielectric strength, WMB-S1100

500 s

Arc resistance, WMB-S1100

V-0

UL 94 rating, all rigid grades

The range at a glance

Product family	Grades	Form	Size / thickness	Page
Rigid mica boards	WMB-M550 · WMB-P800 · WMB-S1100	Rigid sheet, machined parts	1000×1200 / 1000×2400 mm · 1–50 mm	3
Heater mica plates	WMH-M550 · WMH-P800 · WMH-S1100	Thin rigid sheet, stamped parts	1000×600 / 1000×1200 / 1000×2400 mm · 0.15–1.5 mm	4
Flexible mica sheets	WMF-M500 · WMF-P600	Flexible sheet, stamped parts	1000×600 / 1000×1200 mm · 0.15–5 mm	4
Mica rolls	WMR-GMG · GMP · GM · PM · CM	Backed mica paper roll / cut sheet	0.2–5 mm	4
Mica tubes & bushes	WMT-M550 · WMT-P800 · WMT-S1100 · WMT-N130	Tube, bush, collar bush	ID from 8 mm · length up to 1000 mm	4
Mica gasket sheet	WMG-P · WMG-PSS	Sheet, punched gaskets	Up to 3 mm	4
Natural muscovite mica	WMN-BLK · STR · DSC · FAB · GGS · TRW	Blocks, splittings, strips, discs, washers, shields	Cut to size / drawing	5

Choosing the mica type

● Muscovite

CREAM / RUBY · TO 550 °C

Best electrical and mechanical strength and lowest dielectric loss. First choice for switchgear, busbar and arc-barrier parts.

● Phlogopite

AMBER-BROWN · TO 800 °C

Higher heat resistance and softer to machine. The standard for induction furnace, EAF / LF and smelting insulation.

○ Synthetic

WHITE · TO 1100 °C

Highest temperature index, dielectric strength and arc resistance. For the most severe heat and arc duty.

Typical properties of natural mica (mineral, literature values)

Property	Muscovite	Phlogopite	Unit
Maximum operating temperature	500–600	800–900	°C
Dielectric strength (25–75 µm film)	40–80	30–60	kV/mm
Loss tangent	$0.1\text{--}0.4 \times 10^{-3}$	$1\text{--}5 \times 10^{-3}$	—
Volume resistivity at 25 °C	$4 \times 10^{13} \text{--} 2 \times 10^{17}$	$10^{12} \text{--} 10^{14}$	Ω·cm

FLAGSHIP PRODUCT

WedgeMICA Rigid Mica Boards

Silicone-bonded mica laminate pressed from muscovite, phlogopite or synthetic mica paper under controlled heat and pressure into flat, rigid sheets. Fully resistant to high heat while keeping excellent electrical insulation, and easily machined into any shape.

- Arc chutes, arc barriers and phase barriers
- Busbar supports in switchgear and panels
- Induction furnace coil and slip-plane insulation
- EAF / LF electrode clamp and mast-arm insulation
- Resistor banks, heaters and high-heat enclosures



WMB-M550

MUSCOVITE · CREAM

Temperature index	550 °C
Dielectric strength	≥ 19.7 kV/mm
Arc resistance	420 s
Tensile strength	195 MPa

WMB-P800

PHLOGOPITE · BROWN

Temperature index	800 °C
Dielectric strength	≥ 21.7 kV/mm
Arc resistance	420 s
Tensile strength	110 MPa

WMB-S1100

SYNTHETIC · WHITE

Temperature index	1100 °C
Dielectric strength	≥ 23.6 kV/mm
Arc resistance	500 s
Tensile strength	110 MPa

Technical data (typical values)

Property	WMB-M550	WMB-P800	WMB-S1100	Unit
PHYSICAL & MECHANICAL				
Density	2250	2250	2250	kg/m ³
Water absorption	0.35	< 1.0	< 1.0	%
Tensile strength — lengthwise	195	110	110	MPa
Flexural strength — lengthwise	166	NA	NA	MPa
Shear strength	207	207	207	MPa
Rockwell hardness	M70	M70	M70	—
ELECTRICAL & THERMAL				
Dielectric strength (minimum)	19.7	21.7	23.6	kV/mm
Breakdown strength (typical)	25	25	25	kV/mm
Arc resistance (minimum)	420	420	500	s
Relative temperature index	550	800	1100	°C
Flammability (UL 94)	V-0	V-0	V-0	—

Supply: standard sheets 1000 × 1200 mm and 1000 × 2400 mm, thickness 1–50 mm; cut pieces and CNC-machined parts to drawing. Full data in TDS **WIL-TDS-MICA-001**. Typical values, not specification limits; NA = data not available.

THIN & FLEXIBLE FORMATS

Heater plates, flexible sheets and mica rolls

Thin WedgeMICA plates and flexible sheets are pressed from the same mica papers with silicone resin for heating elements, coil and transformer insulation. Mica rolls laminate mica paper to glass, polyester or ceramic backings for slip-plane insulation in induction furnaces.



Heater mica plates — thin rigid sheet

Grade	Mica	Temp. rating	Sizes	Thickness	Typical use
WMH-M550	Muscovite	< 550 °C	1000×600 ·	0.15–1.5 mm	Irons, hair dryers, toasters, kettles, ovens, air heaters, wound heater elements, cylindrical resistance heaters, IF furnaces
WMH-P800	Phlogopite	< 800 °C	1000×1200 ·		
WMH-S1100	Synthetic	< 1100 °C	1000×2400 mm		

Flexible mica sheets

Grade	Mica	Temp. rating	Sizes	Thickness	Typical use
WMF-M500	Muscovite	< 500 °C	1000×600 ·	0.15–5 mm	Heat guns, fan heaters, circuit breakers, transformers, generators, magnetic and coil insulation
WMF-P600	Phlogopite	< 600 °C	1000×1200 mm		

Mica rolls — WedgeMICA WMR series

Grade	Construction	Grade	Construction
WMR-GMG	Glass + mica paper + glass	WMR-PM	Polyester + mica paper
WMR-GMP	Glass + mica paper + polyester	WMR-CM	Ceramic + mica paper
WMR-GM	Glass + mica paper	Rolls or cut sheets · thickness 0.2–5 mm	

Mica rolls act as a slip plane between crucible and coil in induction furnaces — protecting the coil from refractory expansion, blocking leakage currents and easing crucible removal.

Mica tubes & bushes

Grade	Mica / binder	Temp.
WMT-M550	Muscovite / silicone	< 550 °C
WMT-P800	Phlogopite / silicone	< 800 °C
WMT-S1100	Synthetic / silicone	< 1100 °C
WMT-N130	Natural mica / shellac	< 130 °C

Tubes, bushes, collar bushes and mica-on-steel rods. ID from 8 mm; length up to 1000 mm. For motors, appliances, resistors, furnaces and ovens.

Mica gasket sheet

Grade	Construction
WMG-P	High-temperature phlogopite mica, semi-flexible
WMG-PSS	Phlogopite mica reinforced with stainless steel — for higher pressures

Sheets and punched gaskets, thickness up to 3 mm. For exhaust and automotive flanges, gas turbines, gas and oil burners and heat exchangers.

FROM THE MINE

Natural ruby muscovite mica

Ruby muscovite from the Giridih mica belt of Jharkhand, India, graded by visual quality and cut into strips, discs, washers and shields. Thin natural sheet mica has very high dielectric strength (40–80 kV/mm as film) and stays transparent for sight-glass duty.

- **WMN-BLK Mica blocks** — ruby and green-spotted, grades No. 4 / No. 5, random thickness
- **WMN-STR Splittings & strips** — muscovite strips for capacitors, heaters and insulation
- **WMN-DSC Discs & washers** — die-cut or lathe-cut, qualities V1–V6
- **WMN-FAB Fabricated mica** — 60–100 µm cut pieces, e.g. 13×18, 18×22, 20×24, 22×29, 24×39 mm
- **WMN-GGS Gauge-glass shields** — for boiler water-level gauges, lengths 340, 360 mm and to order
- **WMN-TRW Transistor washers & corrugated mica** — to drawing



Quality grading: natural muscovite is supplied in visual qualities V1 (clearest) to V6, added as an SKU suffix — e.g. **WMN-DSC-V2**. Specify quality, size and thickness, or send a drawing / sample.



MADE TO DRAWING

Fabricated & machined parts

CNC fabrication converts any WedgeMICA board, sheet or tube into finished insulation components — delivered ready to fit, counted and labelled by drawing number.

- Arc barriers, phase barriers and busbar supports
- Washers, rings, spacers, collars and bushes
- Slotted coil supports and terminal plates
- Drilled, milled, turned and threaded parts
- Stamped heater plates and gear-wheel parts

Supplied under SKU **WMX-[grade]-[drawing no.]**, e.g. WMX-P800-D1042. Send a DXF / DWG / PDF drawing with grade, quantity and any test requirement for a quotation.

Documentation

Technical Data Sheet with every quotation; Material Test Certificate with batch test values on every delivery.

Export packing

Sheets packed flat and interleaved on wooden pallets or in wooden cases; parts counted and labelled by drawing number.

Samples

Sample pieces of board, sheet and natural mica available for evaluation and approval before bulk orders.



WHERE WEDGEMICA WORKS

Selection by application

Application	Recommended product
Switchgear arc chutes, phase barriers, busbar supports	Rigid board WMB-M550 / WMB-S1100
Induction furnace — coil supports, spacers, top & bottom panels	Rigid board WMB-P800, tubes WMT-P800
Induction furnace — slip plane between crucible and coil	Mica rolls WMR-GMG / GM / CM
EAF / LF — electrode clamp, mast arm, roof-lift, bus tube insulation	Rigid board WMB-P800, machined parts
Smelting pots and cells — busbar, anode clamp, cradle insulation	Rigid board WMB-P800 / WMB-S1100
Heating elements and domestic appliances	Heater plates WMH-M550 / WMH-P800 / WMH-S1100
Motors, transformers, coils, circuit breakers	Flexible sheets WMF-M500 / WMF-P600, tubes WMT-M550
High-temperature flanges, burners, turbines	Gasket sheet WMG-P / WMG-PSS
Boiler gauge glasses, sight windows	Natural mica WMN-GGS shields

How to order

Order by Wedge SKU: **family-grade-thickness (mm)-size**. Size codes: 1006 = 1000×600, 1012 = 1000×1200, 1024 = 1000×2400 mm, CUT = cut to drawing. Example: **WMB-P800-10-1012** = WedgeMICA phlogopite rigid board, 10 mm, 1000 × 1200 mm. MOQ and lead time are confirmed with each quotation. Technical Data Sheets and Material Test Certificates are available with every order.

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