CCO SPECIALISTS

QBRAZE™ 2000

VACUUM-BRAZED TUNGSTEN CARBIDE TILE WEAR LINERS

Technical Data Sheet

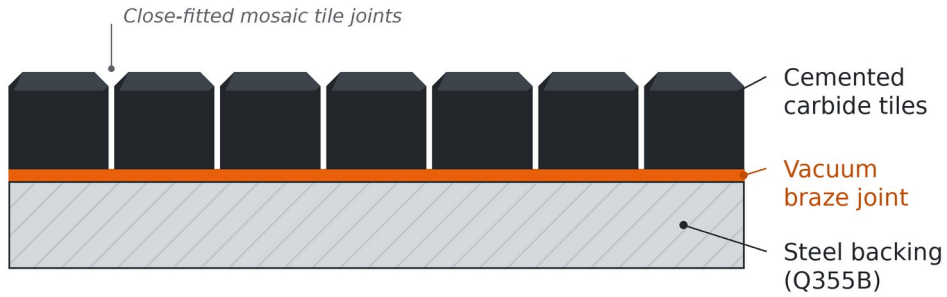
QBRAZE™ 2000 is manufactured from solid cemented tungsten carbide (WC-Co) tiles, vacuum-brazed in a mosaic pattern onto a Q355B steel backing plate. It is the most wear-resistant product in the QAME range — for extreme sliding abrasion where even welded tungsten carbide overlay wears out.

Specification

QBRAZE™ 2000 tiles are YG-class cemented carbide manufactured to the relevant GB/T standards for hardness, density and transverse rupture strength. Tiles are furnace-brazed to the backing plate under vacuum, giving a continuous, void-controlled braze joint across the full tile face — not spot or edge fixing. Every batch is tested under the QAME ISO 9001:2015 quality system and certified test reports accompany each shipment.

Construction

Chamfered carbide tiles are laid out as a close-fitted mosaic and metallurgically bonded to the steel backing through the vacuum braze joint. The steel backing carries all attachment features and is welded or bolted into position in the normal way.



QBRAZE™ 2000 construction — carbide tile mosaic, vacuum braze joint, steel backing

Typical Properties

Property	QBRAZE™ 2000
Duty	Extreme sliding abrasion — beyond welded tungsten carbide overlay
Tile material	Cemented tungsten carbide (WC-Co), YG-class per GB/T
Tile hardness	≥88 HRA (≈ ≥70 HRC equivalent)
Tile density	~14.5 g/cm³
Transverse rupture strength	≥1,500 MPa
Braze joint	Vacuum furnace brazed — shear strength ≥150 MPa typical
Backing plate	Q355B structural steel — weldable and drillable
Service temperature	Up to ~450 °C (limited by braze alloy)
Impact resistance	Moderate — consult QAME for high-impact duties

Typical values. *Certified batch test figures are provided with each order.*

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Values are typical and for guidance; certified test values are provided with each order. FLOWCLAD™, QBRAZE™, QCLAD™, MAXCLAD™, QMAX™ and QARC™ are trademarks of QAME.

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Standard Combinations

Standard liners are designated backing + tile in millimetres. The equivalent description in overlay-plate convention is shown for comparison.

Designation (backing + tile)	Tile (mm)	Backing Q355B (mm)	Total (mm)	Overlay-convention equivalent
6 + 10	10	6	**16**	10 mm carbide on 6 mm backing
16 + 10	10	16	**26**	10 mm carbide on 16 mm backing
20 + 6	6	20	**26**	6 mm carbide on 20 mm backing

Custom combinations are available on request — supplier practice in this product class spans tile thicknesses of 6–22 mm on backings of 6–35 mm. Custom tile layouts, liner shapes, holes and radii are made to drawing.

Fabrication & Attachment

Tiles cannot be cut, welded or formed after brazing — QBRAZE™ 2000 liners are manufactured to final size and shape. Each liner is drilled and profiled to the customer drawing before brazing. Attachment is through the steel backing:

- Countersunk bolt holes
- Welded studs
- Plug-weld pockets in tile-free zones

Any site welding must be confined to tile-free zones of the backing plate, keeping the braze joint below its service temperature limit.

Service Temperature

Service temperature is limited by the braze alloy — QBRAZE™ 2000 is suitable for continuous service to approximately 450 °C (typical). Consult QAME for elevated-temperature duties.

Quality Assurance

Manufactured under an ISO 9001:2015 quality system. Every batch is tested, and certified test reports are issued with each shipment.

Applications

Extreme sliding abrasion in hard-rock mining, iron ore, coal, lithium and cement, such as:

- Transfer chutes and dead-boxes after crushers
- Skirt liners
- Hopper and bin wear zones
- Cyclone and classifier components
- Feeder and screen wear strips

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