QAME
CCO SPECIALISTS

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QCLAD™

TRADITIONAL CHROMIUM CARBIDE OVERLAY WEAR PLATE · 60 / 80 / 90

QCLAD™ is a proven multi-bead chromium carbide overlay wear plate — a high chromium, high carbon alloy fused onto a weldable mild steel base by submerged arc welding, manufactured to AS/NZS 2576:2005.

Three grades cover the full spectrum of duties: QCLAD 60 for general sliding abrasion with continuous impact, QCLAD 80 with complex carbides for medium-to-high abrasion and impact, and QCLAD 90 with a martensitic matrix for the finest particle abrasion. The mild steel backing gives every grade full structural integrity — entire structures can be fabricated from QCLAD™.

MATERIAL & MICROSTRUCTURE

- High-chromium, high-carbon overlay with primary M_7C_3 carbides
- Primary carbide volume fractions of 15–40% by grade
- Grade 90 martensitic matrix option for fine-particle abrasion

MECHANICAL PROPERTIES

- Bulk hardness >630 HV30 (~57 HRC); Grade 90 to 780 HV30 (64 HRC)
- Primary M_7C_3 carbides ~1500 HV0.5
- QCLAD 60 and 80 withstand continuous impact

QUALITY & WORKABILITY

- Single-pass weld deposition for consistent quality
- High-strength metallurgical bond with a defect-free interface
- Excellent machinability for cutting, rolling, forming and fabrication

Benefits

- Welding into position made easy by the mild steel base
- Proven performance against Q&T steels
- Manufactured to AS/NZS 2576:2005 grades
- Readily formed into almost any shape mild steel can
- Three grades to match the duty and budget

Applications

Applications involving high sliding abrasion and medium impact, such as:

- Chutes
- Ore bins
- Feeders
- Excavator bucket protection
- Stackers
- Mobile plant
- TLO – Train load out
- Hoppers
- Screen decks
- Spill plates

QAME stocks a variety of QCLAD™ wear plates in all three grades. **Standard thickness** is available in the following combinations, however any thickness combination is achievable:

Hardface (mm)	6	6	7	8	9	8	9	10	12	8	9	10	17	20
Backing (mm)	6	8	8	8	8	10	10	10	10	12	12	12	12	12
Total thickness (mm)	**12**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**22**	**20**	**21**	**22**	**29**	**32**

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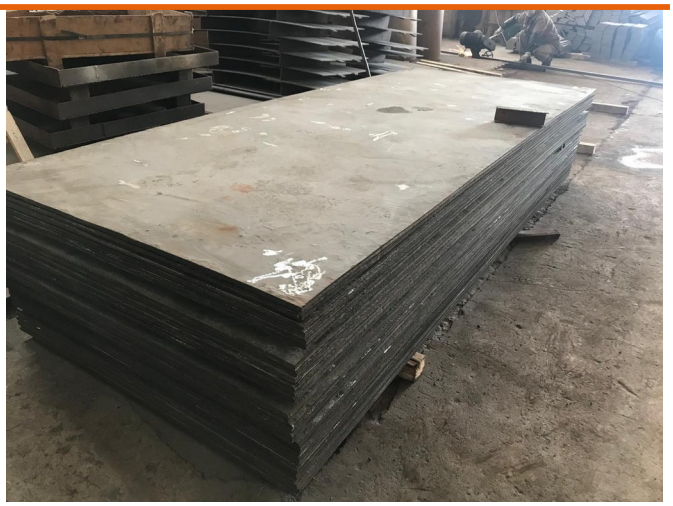
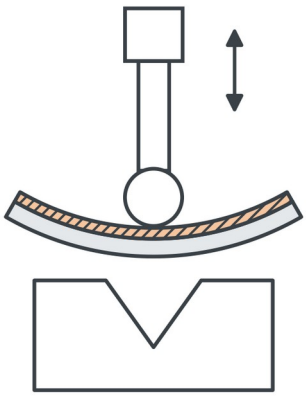
QCLAD™ liner package installed — dozer blade



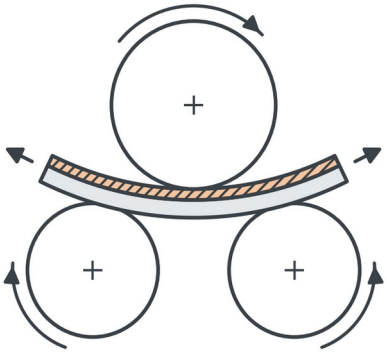
QCLAD™ plate stock ready for dispatch

FORMING & FABRICATION

QCLAD™ can be press-bent or rolled — form perpendicular to the weld bead direction, using a wide-set die and rounded tooling. Plate can be plasma cut, drilled from the mild steel side, and attached by plug welds, studs or perimeter fillet welds.



Press bending



Rolling — perpendicular to beads

Formed transfer chute liner

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CHEMICAL COMPOSITION

Grade	C	Si	Mn	Cr	W	Mo+Nb+Ti+V+W	Bal.
FLOW60	3.5–7.0%	0.5–2.5%	0.5–2.5%	23–35%	–	–	Fe
FLOW80	3.5–6.0%	0.5–2.5%	0.5–2.5%	23–35%	–	2.0–4.0%	Fe
FLOW6000	3.5–7.0%	0.5–2.5%	0.5–2.5%	23–35%	3.0–7.0%	–	Fe

Typical weld deposit chemistry. Values are indicative and may vary with plate thickness and number of deposit layers.

QCLAD™ wear plate is particularly suited to material handling systems across the mining, cement and power generation industries, where it significantly reduces maintenance costs and improves production efficiency. Plates can be cut, rolled and fabricated to suit, and customised in a range of thicknesses and specifications to meet specific operational requirements — contact our team to discuss your application.

In service — bucket wheel excavator, high sliding abrasion duty

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