



Hardlite™



ACTING GLOBAL
WELDING LOCAL

WA Integra™
Hardlite™

This brochure presents the features of composite Hardlite™ wear plate, from the manufacturing process, the wear deposit characteristics and resistance, to the applications. We will gladly examine any special request. Please do not hesitate to consult us.

The service performance of composite Hardlite™ wear plate - designed, developed and manufactured by Welding Alloys - has proven that great cost savings can be achieved compared to replacement with a new part, either cast or forged.

Benefits of the WA solutions

- ↓ **Economic approach:** assembly and disassembly + loss of production
We help you to get the overall cost down
- ↑ **Service approach:** service life + yield + production quality
We help you to increase production performance

WA Integra: 3 types of service

- Supply of wear plate for reworking
- Supply of pieces prepared to specification and ready for assembly
- Construction of assembly in our workshops or turn-key projects on site

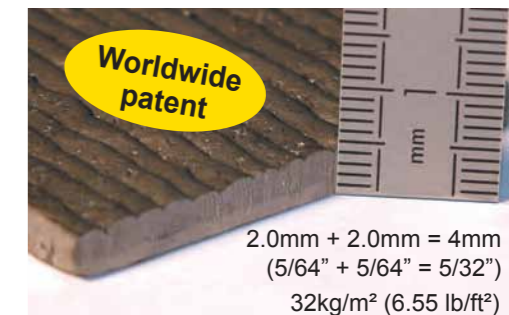
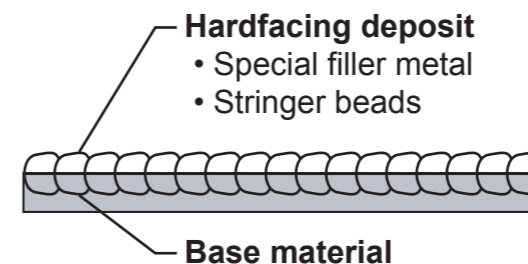


Helping you out with wear problems

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Ultra-thin composite wear plate – less than 5mm (13/64")



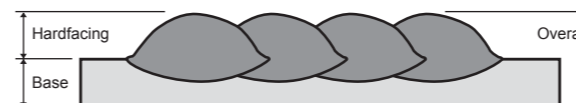
Specific composite Hardlite™ wear plate process

- Quick solidification of the weld deposit
- Homogeneous microstructure with high volume of chromium carbides
- Optimum hardness (66-68 HRC - harder than quartz) adapted to extremely high wear resistance and moderate impact
- Fair corrosion resistance
- Outstanding wear properties up to approximately 200°C (400°F)
- High temperature resistant and corrosion resistant Hardlite™ also available (see page 7 for more details)

Dimensions:

- 1950mm length x 950mm width
- Sizes made in the USA: 37"x76" and 48"x96"

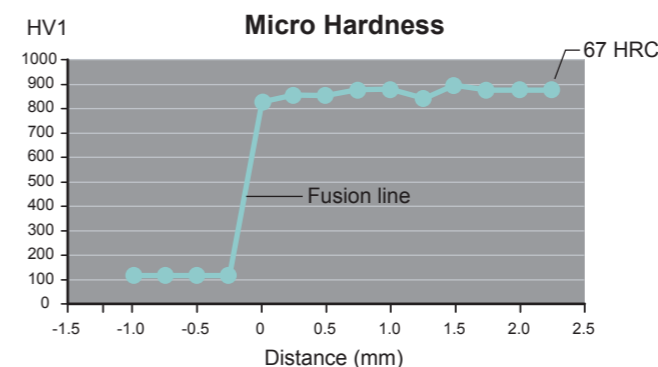
Special sizes can be manufactured – please check with your local sales office



Thickness:

Base	Hardfacing	Overall
2mm (5/64")	2mm (5/64")	4mm (5/32")
2mm (5/64")	3mm (1/8")	5mm (13/64")
3mm (1/8")	2mm (5/64")	5mm (13/64")
3mm (1/8")	3mm (1/8")	6mm (1/4")

Wear deposit characteristics:



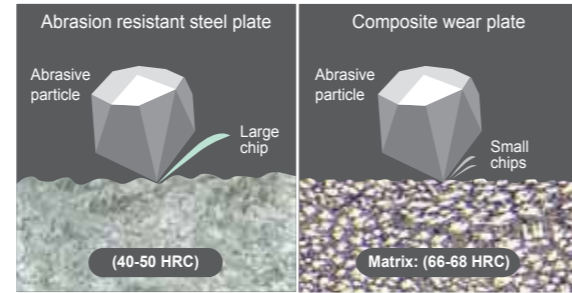
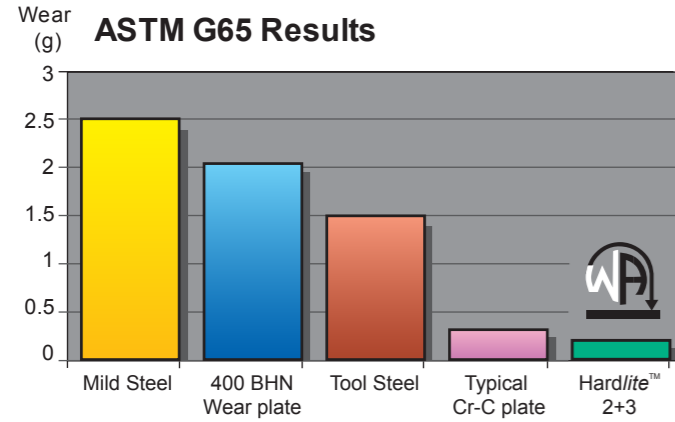
Technical data:

Microstructure

Fined grained, saturated with microscopic chromium carbide particles. Total carbide content averages 92%*.

* Independent laboratory test.

Comparative wear tests



(Test carried out by an independent laboratory)

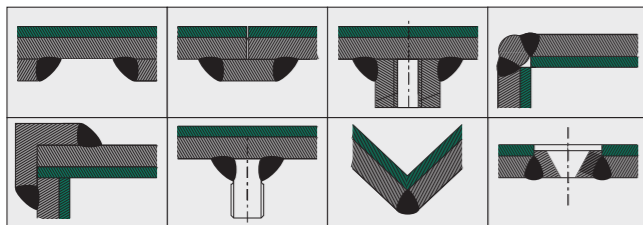
Principal industries

- Steelmaking
- Cement
- Mines
- Quarries
- Public works
- Glassmaking
- Brickmaking
- Recycling
- Agriculture
- Dredging
- Thermal power stations
- Waste incinerators

Examples of applications

- Hoppers
- Chutes
- Buckets
- Pipework
- Elbows
- Armouring
- Screen
- Fan blades
- Cyclones
- Screw conveyors
- Classifier blades
- Riddles

Examples of fixing:



Ease of use

Numerous fixing and assembly processes are possible.

Welding and cutting processes do not affect the wear properties of the Hardlite™ plate. Matching weld materials are also available for the protection of internal joints and seams.

Hardlite™ plate can be cut and formed easily. It is used for armouring or double facing of components subjected to static or dynamic constraints:

- Specially adapted for applications where weight is restricted
- More adaptable, lighter, harder
- Advantageous for moving parts



(Technical and application data sheets on request)

Examples of Applications

Cement



Isolation valve



Reducing cone



Endless screw conveyor



Tube $\varnothing < 60\text{mm}$



Internal armouring of a vertical crusher



Cement works - cone

John, a satisfied maintenance manager of a raw mill in a cement plant.

“The replacement of worn components with Hardlite™ is a big benefit to us. It is light, easy to apply and helps us to reduce our maintenance cost to a quarter of the original”.



Examples of Applications

Cement



Cement works - classifier



Cement works - square > round



Cement mill - metering/vibrating table



Cement mill

Steel



Steel mill - fan



Steel mill - sinter dust extractor ducting

Various



Vibrating riddle plate



Turbo-mixer flukes



Separator bars



Gas recycling conduit for glassworks

High temperature and corrosion resistant **Hardlite™** wear plate



Hardlite™ (SS)



Ultra-Hardlite™ (SS)
Coal nozzle - power station

Examples:

- Corrosion resistant Hardlite™ with chromium carbides: Hardlite™ (SS)*
- High temperature resistant Hardlite™ with complex carbides: Ultra-Hardlite™ (SS)*
- Up to 1100°F

* Stainless Steel

A perfectly controlled technology



WA Cored Wires™

Design and manufacture of all types of cored welding wires



WA MultiSurfacer™

Design and manufacture of automated welding equipment for hardfacing and rebuilding applications



WA Integra™ Services

Innovative hardfacing and rebuilding solutions by welding

A worldwide presence

United Kingdom (Head office)

Welding Alloys Ltd

Argentina

Welding Alloys Argentina S.A.

Australia (Trading Partner)

Specialised Welding Products Pty Ltd

Brazil

Welding Alloys Brasil Ltda

China

Welding Alloys China Ltd

Egypt

Welding Alloys Egypt

Finland

Welding Alloys Finland Oy

France

Welding Alloys France SAS

Germany

Welding Alloys
Deutschland GmbH

Greece

Welding Alloys Hellas EPE

India

Welding Alloys
South Asia Pvt Ltd

Iran

Aliaj Joosh Iran

Italy

Welding Alloys Italiana s.r.l.

Japan

Welding Alloys Japan

Malaysia

Welding Alloys (Far East) Sdn. Bhd.

Mexico

Welding Alloys
Panamericana S.A. de C.V.

Morocco

Welding Alloys Maroc Sàrl

Poland

Welding Alloys Polska Sp. z o.o.

Russia

ZAO Welding Alloys

South Africa

WASA (PTY) Ltd

South Korea

Welding Alloys Korea Ltd

Spain

Welding Alloys España

Sweden

Welding Alloys Sweden

Taiwan

Welding Alloys Taiwan Co.

Thailand

Welding Alloys (Thailand) Co. Ltd

Turkey

Welding Alloys Limited Şirketi

Ukraine

Welding Alloys Ukraine

United Arab Emirates

Welding Alloys Middle East FZC

USA

Welding Alloys (USA) Inc.

Vietnam

Welding Alloys Vietnam Co. Ltd.

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