

## BISPLATE 360

BISPLATE 360 is a through hardened, abrasion resistant steel plate, offering long life expectancy in high impact abrasion application.

### APPLICATIONS

The through hardness of BISPLATE 360, together with good mechanical properties, makes this grade the most popular wear plate in Australia and it has been used extensively in the following areas:

- ° Wear Liners
- ° Earthmoving Buckets
- ° Longwall Pan Lines
- ° Gear Wheels
- ° Deflector Plates
- ° Chutes
- ° Storage Bins
- ° Cyclones
- ° Hoppers

### FABRICATION

BISPLATE 360 is a high hardness, abrasion resistant steel with a controlled carbon equivalent for optimum weldability.

With appropriate attention to heat input, preheat and consumable selection, BISPLATE 360 can be readily welded to itself and other steels, using conventional processes.

Cold forming of BISPLATE 360 plates is possible in all thicknesses, provided the high strength of this steel is taken into account. Adequate allowance must be made for increased springback relative to mild steel.

Heating above 400°C should be avoided, otherwise the mechanical properties may be affected.



### MECHANICAL PROPERTIES

PROPERTIES	SPECIFICATION	TYPICAL
0,2% Proof Stress		1190 MPa
Tensile Strength		1260 MPa
Elongation in 50 mm G.L.		13%
Charpy Impact (Longitudinal) + 20°C (10mm x 10mm)		47J
Hardness	360-400 HB	380HB

### CHEMICAL COMPOSITION

THICKNESS (mm)		C	P	Mn	Si	S	Cr	Mo	B	CE (IIW)	PCM
5 - 12	Typical	0.16	0.010	1.10	0.20	0.003	-	0.20	0.0010	0.40	0.25
>12 - 80	Typical	0.18	0.010	1.40	0.20	0.003	0.20	0.20	0.0010	0.50	0.29
>80 - 100	Typical	0.16	0.010	1.15	0.20	0.003	0.90	0.20	0.0010	0.58	0.30

## BISPLATE 400

BISPLATE 400 is a through hardened, abrasion resistant steel plate, offering long life expectancy in high impact abrasion application.

### APPLICATIONS

BISPLATE 400, offers excellent wear and abrasion resistance and impact toughness in applications which include:

- ° Dump Truck Wear Liners
- ° Screw Conveyors
- ° Chutes
- ° Storage Bins
- ° Earthmoving Buckets
- ° Cyclones
- ° Deflector Plates
- ° Ground Engaging Tools
- ° Cutting Edges

### FABRICATION

BISPLATE 400 is a high hardness, abrasion resistant steel offering very good impact toughness properties.

BISPLATE 400 provides an optimum combination of abrasion resistance, toughness and weldability.

Due to its low alloy content, BISPLATE 400 can be readily welded using conventional welding processes and low hydrogen consumables.

Cold forming of BISPLATE 400 is achievable on all thicknesses although an allowance for the higher strength should be taken into account. Bending machine capabilities should also be taken into consideration prior to any forming operation.

Heating above 350°C should be avoided, otherwise mechanical properties may be affected.

### MECHANICAL PROPERTIES

PROPERTIES	SPECIFICATION	TYPICAL
0,2% Proof Stress		1275 MPa
Tensile Strength		1350 MPa
Elongation in 50 mm G.L.		12%
Charpy Impact (Longitudinal) + 20°C (10mm x 10mm)		42
Hardness	360-440 HB	390 HB



### CHEMICAL COMPOSITION

THICKNESS (mm)		C	P	Mn	Si	S	Cr	Mo	B	CE (IIW)	PCM
5 - 12	Typical	0.16	0.010	1.10	0.20	0.003	-	0.20	0.0010	0.40	0.25
>12 - 80	Typical	0.18	0.010	1.40	0.20	0.003	0.20	0.20	0.0010	0.50	0.29
>80 - 100	Typical	0.16	0.010	1.15	0.20	0.003	0.90	0.20	0.0010	0.58	0.30



## BISPLATE 425

BISPLATE 425 is a through hardened, abrasion resistant steel plate, offering long life expectancy in sliding and gouging abrasion applications, with impact loading.

### APPLICATIONS

BISPLATE 425, offers exceptionally long life in high abrasion applications with impact loading. Applications include:

- ° Dump Truck Wear Liners
- ° Chutes
- ° Wear Liners
- ° Ground Engaging Tools
- ° Cutting Edges

### FABRICATION

BISPLATE 425 is a medium carbon, high hardness, abrasion resistant steel. With appropriate attention to heat input, preheat and consumable selections, BISPLATE 425 can be successfully welded to itself and a range of other steels by conventional techniques.

Because of its high hardness, cold forming forces, and greater allowances must be made for springback.

Heating above 300°C should be avoided, otherwise mechanical properties may be affected.

### MECHANICAL PROPERTIES

PROPERTIES	SPECIFICATION	TYPICAL
0,2% Proof Stress		1400 MPa
Tensile Strength		1480 MPa
Elongation in 50 mm G.L.		11%
Charpy Impact (Longitudinal) + 20°C (10mm x 10mm)		38J
Hardness	400-460 HB	440 HB

### CHEMICAL COMPOSITION

THICKNESS (mm)		C	P	Mn	Si	S	Cr	Mo	B	CE (IIW)	PCM
6 - 100	Typical	0.29	0.015	0.55	0.22	0.003	1.00	0.18	0.0010	0.62	0.40

## BISPLATE 500

BISPLATE 400 is a through hardened, abrasion resistant steel plate, offering long life expectancy in sliding and gouging abrasion applications.



### APPLICATIONS

BISPLATE 500 is the hardest steel produced by Bisalloy Steels and offers exceptionally long life in sliding abrasion applications.

- ° Dump Truck Wear Liners
- ° Chutes
- ° Wear Liners
- ° Earthmoving Buckets
- ° Ground Engaging Tools
- ° Cutting Edges

### FABRICATION

BISPLATE 500 is a medium carbon, high hardness, abrasion resistant steel. With appropriate attention to heat input, preheat and consumable selections, BISPLATE 500 can be successfully welded to itself and a range of other steels by conventional techniques.

Because of its high hardness, cold forming of BISPLATE 500 is difficult, requiring higher bending and forming forces, and greater allowances must be made for springback.

If heating is necessary, this should not exceed 200°C otherwise mechanical properties may be affected.

### MECHANICAL PROPERTIES

PROPERTIES	SPECIFICATION	TYPICAL
0,2% Proof Stress		11580 MPa
Tensile Strength		11640 MPa
Elongation in 50 mm G.L.		10%
Charpy Impact (Longitudinal) + 20°C (10mm x 10mm)		31J
Hardness	477-534HB	486 HB

### CHEMICAL COMPOSITION

THICKNESS (mm)		C	P	Mn	Si	S	Cr	Mo	B	CE (IIW)	PCM
6 - 100	Typical	0.29	0.015	0.55	0.22	0.003	1.00	0.18	0.0010	0.62	0.40