



DURAPLATE® D31T

DURAPLATE D31T is an overlay plate made from drawn cords of chrome carbides, with a hardness ranging from 60 to 62 HRC, and the hard phases predominantly at 1650 HV.

It withstands very severe abrasion up to temperatures of 350°C and is resistant to moderate impacts.

For applications involving both severe abrasion and high impact, we recommend our DURAPLATE D38T overlay plate.

Main applications Shields, casings, cyclones, separators, screens, fans, pipelines, tunnel boring machines, augers, pick blades, and all fabricated parts.

Hardness Carbures de chrome primaire de 1300 à 1650HV

Mechanical properties
Typical value, S355 The overlay itself does not have specific mechanical properties, but the support on which it is welded possesses suitable characteristics. The supporting metal can be S235, S355, HLE, Stainless Steel, or DURSTEEL 410, with the following mechanical properties:

Rp 0.2 (Yield Strength): 355 MPa
Rm (Tensile Strength): 510 MPa
A% (Elongation): 22%

Chemical composition

Typical values

C (Max %)	Si (Max %)	Mn (Max %)	Cr (Max %)	Ni (Max %)	B (Max %)	Fe (Max %)
5	1.5	1.5	27	0.10	0.5	Reste

Dimensions Format L : 3000x1500 dont surface utile 2900x1400 = 4,06m²
Format XL : 3000x2000 dont surface utile 2900x1900 = 5,51m²

Thicknesses Standard : 3+3, 4+2, 5+3, 4+4, 6+4, 5+5, 8+5, 7+6, 12+8, 10+9, 10+10
Double Face : 3+4+3, 4+6+4, 5+8+5

Custom: Base plate thickness: min 3mm / max 30mm - Overlay thickness:
min 3mm / max 12mm



Specificity

The plates made from drawn cords exhibit unique characteristics in the market. Hardness, chemical composition, and microstructure remain consistent throughout the entire plate.

They can be placed in any orientation without concerns about differences in behavior. The cracks are very fine and do not penetrate the base metal. It is possible to utilize 100% of the plate.

The average rejection rate is 10%, compared to 30% for other plates in the market.

Implementation

DURAPLATE D31T possesses excellent roll forming, crimping, and bending capabilities. Bending is possible, although it is advisable to use welded fabrication for the plates.

Roll forming with a diameter of 300mm is achievable with overlay on the inside or outside.

Weldability

Assembly with our EASYCOR 70M or CORINOX 307 wire and weld protection using our DURCOR31W0 wire.

For all applications requiring a higher-temperature anti-abrasion steel, we recommend using our DURAPLATE D45T overlay plate (refer to the technical datasheet on our website wa-produr.com).