



## INFORMATION SHEET

### CHROMAX PLATE (Wear Resist Plates)

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#### INTRODUCTION

**CHROMAX PLATE** is manufactured by a unique process developed indigenously, in which, a heavy layer of highly wear resistant material (Chromium Carbide) is overlaid over MS base plate. It is the concentration of carbide structure that gives CHROMAX, its unique wear resistant characteristics.

#### SALIENT FEATURES OF CHROMAX PLATE

- CHROMAX has hardness of 58-62 & 53-57 Rc (Rockwell C Scale). The toughness is due to the dendritic structure of carbides suspended in tough wear resistant matrix.
- The wear resisting side of the CHROMAX has smooth wide weld bands, these are fused together to form an even flat continuous surface.
- The bond between the mild steel plate and the deposit is strong as the load is spread over a smooth surface which prevents denting and stress concentration.
- CHROMAX offered unparalleled resistance to high stress abrasion and prolonged impact loading at a high temperature up to 700°C.
- Due to concentration of stresses during the manufacturing process cracks develop at right angles to the surface and do not penetrate beyond the Carbide layer if the fusion between the overlay and backing plate is good. These cracks are essential for stress relieving purposes.
- Cold abrasion tests have shown an improvement in wear resistance at 30 times that of mild steel.
- Hot abrasion tests have shown 20 to 1 improvement over mild steel at 700°C. 3 to 1 improvement over traditional wear resistant materials such as Ni-Hard. Normal conditions show 12 to 1 improvement over heat treated Mn Steel.
- CHROMAX is very cost effective, giving extremely long life reducing maintenance and downtime and increasing productivity and efficiency.

#### CHROMAX PLATE SIZE

( WRP can also be manufactured as per the customers' requirement. )

BASE PLATE	CHROME OVERLAY
6 mm	4 mm & 6 mm
8 mm	4 mm , 6 mm & 8 mm
10 mm	4 mm , 6 mm & 8 mm
12 mm	4 mm , 6 mm & 8 mm
14 mm	4 mm , 6 mm & 8 mm
16 mm	4 mm , 6 mm & 8 mm
20 mm & above	4 mm , 6 mm & 8 mm



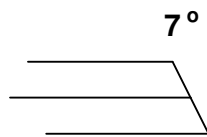
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#### TECHNICAL GUIDELINES ON CUTTING & FORMING

##### *Cutting*



Standard method uses plasma cutting. A 7° taper is maintained while cutting. Cutting is usually done with hard face

##### *Forming*

CHROMAX is formed relatively easily in cold condition using bending or a press brake.

Minimum Radius Of Hard facing

Base Plate	Chrome- Overlay	Internal .Hard Facing	External .Hard Facing
6MM	4 mm	400 mm	2000 mm
8MM	4 mm	400 mm	2000 mm
10MM	4 mm	400 mm	2000 mm
12MM	4 mm	400 mm	2000 mm
14MM	4 mm	400 mm	2000 mm
16MM	4 mm	400 mm	2000 mm

- Tolerances on radius  $\pm 5$  mm,
- Tolerances on concentricity  $\pm 5$  mm.

CHROMAX can be formed at site by the user. Furthermore in case of damage, repairs can be carried out on site.

##### *Fixing*

- CHROMAX PLATE can be welded to Mild Steel Plates by using low hydrogen electrodes.
- CHROMAX PLATE can also be used as a structural component.
- Studs can also be welded to CHROMAX PLATE on M. S. Side for fixing it.
- However, studs are prone to damage during movement. Therefore this should be considered prior to ordering.
- CHROMAX can be fixed using cotter pins also.



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#### TECHNICAL SPECIFICATION

- |                     |  |
|---------------------|--|
| 1. Hardness         | 58 to 62 on Rockwell 'C' Scale<br>53 to 57 on Rockwell 'C' Scale |
| 2. Tensile strength | 20.5 Kg/mm <sup>2</sup>  |
| 3. Impact strength  | 18.2 Kg/mm <sup>2</sup> (charpy test)                            |
| 4. Chromium carbide | 25 - 30%   |

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***For Further Details Please Contact :***

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