



Applications:

IP1200 is suited for applications experiencing high impact and abrasion.

Typical applications include:

- Cement Chute Liners
- Trommels
- Bin Liners
- Agricultural Equipment
- Deflectors

Specifications

IP1200 Chromium Carbide Overlay Plate is manufactured in accordance with Australian

Standard AS/NZS 2576:2005 Gr 2455 specifications for hard facing alloys and is compliant with the all requirements of Group 2 Alloys, (Table 2.2) Type 24 alloy material.

Microstructure

IP1200 Chromium Carbide Overlay Plate has a microstructure of between 15%-35% chromium-rich M_7C_3 primary carbides in a carbide austenite eutectic matrix, with MC carbides also being present in the top layer. The IP1200 microstructure contains fine primary carbides due to the addition of grain refining elements.

Technical Notes:

Within the standard the grade designation, for example 2455, indicates the alloy type "24", and the hardness in Rockwell HRC "55". Therefore, a "55 HRC" grade must have a minimum of 55 HRC, and a maximum of 59 HRC as an average hardness, and 2460 must have an average hardness ranging between 60 to 64 HRC.

All hardness testing within our Metallurgical laboratory is performed on a Vickers Hardness tester, therefore all HRC values are a conversion from HV50 to HRC.

Due to the nature of the welding process actual hardness and volume fraction of primary carbides can vary across and throughout a plate. The above properties are typical for all plates with an undiluted overlay.

Chemistry*

	%C	%Cr	% min combined Mo, Nb, V, Ti, W
Range (Top layer)	3.5 - 7.5	18 - 35	5 - 14

* - Mn & Si added as minor elements.

Hardness

	Vickers HV50	Rockwell HRC
Typical Range (average)	620 - 690	55 - 59

Backing Plate: AS/NZS 3678-250 (ASTM A36)



Inter-plate IP1200 AS/NZS 2576:2005 Austenitic Complex Chromium Carbide Overlay x 100 magnification