

# Wear Resistance Ltd.

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## TECHNICAL DATA SHEET No. 14

<b>Product:</b>	Grade HD1 Fused Tungsten Carbide deposit.
<b>Description:</b>	A Fused Tungsten Carbide alloy deposit consisting of particles of Fused Tungsten carbide in a Carbon/Chromium/ Tungsten/Iron matrix.
<b>Nominal Composition:</b>	C. 5%, W. 65%, Cr. 9%, Balance Fe. + alloying elements.
<b>Hardness:</b>	83 HRA average.
<b>Availability:</b>	<p>1) As composite wear plate using a standard base material to BS EN 10025 S275. Other base materials (low alloy steels, Stainless steel etc) available, please seek our advice. Minimum base material thickness nominally 6mm, minimum deposit thickness nominally 3.5mm. Maximum deposit thickness nominally 6mm in one pass but multi-pass deposits are available.</p> <p>2) Applied to a variety of pre-formed components and as specialist wearing components with integral countersunk securing bolts for dynamic/vibratory type applications e.g. Fan impeller wear plates, screens etc.</p>
<b>Application Method:</b>	Automatic machine deposition by special process, overlay type deposit. In-house application only, not available for on-site deposition.
<b>Forming &amp; Fabrication:</b>	Can be formed by traditional methods in the cold condition, although where a formed component with the deposit on the convex face is required, this is best achieved by in-house deposition as a pre-formed component to minimise the risk of excessive cracking or spalling. Normal Low Hydrogen consumables may be used for fabrication of base material joints, although we recommend the use of stainless type consumables on joints which may be subject to contamination due to weld preparation, to reduce the risk of cracking. Preheat to 100° C prior to fabrication and allow joints to cool in still air or under thermal blankets. If exposed joints are subject to wear they should be seal welded with our Grade WRA electrodes.
<b>Typical Applications:</b>	Very high abrasion & erosion, medium impact at temperatures up to 400°C. This deposit has proved cost effective in a variety of extreme applications involving high rates of wear, e.g. Sinter fans, Coal Exhausters etc.