General Product Description

Duroxite™ 201 is developed for severe wear and impact applications applying specially formulated abrasive materials on Hardox 450 backing plate. The overlay material is composed of primary chromium-rich carbides and refined multiple-alloy complex carbides dispersed evenly in a ductile eutectic austenite matrix. The additional multi-alloy carbides are harder and finer than the co-existing chromium-rich carbides which interlock between large primary chromium-rich carbides in a matrix.

Key Benefits

- Hardox 450 backing withstands plastic deformation better due to its high yield strength flexing back after impact
- Provides stronger support due to high hardness and better bonding properties between overlay and base steel
- Better performance for impact situations than Duroxite™ 200 at elevated temperatures up to 350° C (660° F), but impact resistance is best at room temperature

Typical Applications

Duroxite™ 201 is widely used in many industries including mining, cement and power generation. Some specific applications include:

- **Mining**
  - Screen plates, loader bucket liners, feeding systems for ball mills, loader bucket liners, bucket lip shrouds, bucket side shrouds, chutes, liner plates and skip liners

- **Cement**
  - Cement furnace components, sinter plant parts, fan blades, mixer blades, crews, gyratory mantles, coal and cement pulverizer rolls, raw material crushing components, molding panels

- **Power**
  - Coal discharger chutes

For more information on applications see the Duroxite™ Product brochure.
The microstructure of Duroxite™ 201 contains primary chromium-rich carbides and refined multiple-alloy complex carbides with a typical hardness of 2500 to 3000 HK\(^4\)) dispersed evenly in a ductile eutectic austenite matrix. The typical volume fraction of primary chromium-rich carbides is maintained between 30 to 40% with 7 to 10% of multi-alloy complex carbides.

\(^4\) HK is the Knoop microhardness used primarily for very brittle materials or thin sheets.
Tolerances

**Thickness**

Overall and overlay thickness tolerances can be guaranteed within ±10% of specified thickness.

**Flatness**

Plate flatness tolerance can be guaranteed within ±3 mm (±1/8") over 1.5 m (5') plate length for plate dimensions equal to or less than 1.5 m (5') x 3.0 m (10'). For plates greater than 1.5 m (5') wide by 3.0 m (10') long, the following flatness guarantees apply.

<table>
<thead>
<tr>
<th>Standard overlay thicknesses</th>
<th>Flatness tolerance</th>
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<tbody>
<tr>
<td></td>
<td>1.8 m x 3.0 m (6' x 10')</td>
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<tr>
<td>Metric unit</td>
<td>Imperial unit</td>
</tr>
<tr>
<td>5 mm on 7 mm</td>
<td>3/16&quot; on 5/16&quot;</td>
</tr>
<tr>
<td>6 mm on 6 mm</td>
<td>1/4&quot; on 1/4&quot;</td>
</tr>
<tr>
<td>10 mm on 10 mm</td>
<td>3/8&quot; on 3/8&quot;</td>
</tr>
</tbody>
</table>

For custom sizes, please consult your local sales representative or local Hardox Wearparts center for flatness guarantees.

Delivery Conditions

Duroxite™ 201 is normally supplied in an as-welded condition, but can also be supplied in a ground condition upon request.

Fabrication and Other Recommendations

**Welding, cutting, forming and machining**

Recommendations can be found in the Duroxite™ Product brochure, or consult your local technical support representative.