WA Applications for Mineral Industries
### WA Consumables - Hardfacing - Repair and Maintenance

#### Pick the right solution

<table>
<thead>
<tr>
<th>Product name</th>
<th>Process</th>
<th>Hardness 3 layers</th>
<th>Description</th>
<th>Joining</th>
<th>Mineral abrasion</th>
<th>Metal to metal abrasion</th>
<th>High temperature Work hardening</th>
<th>Impact</th>
<th>Corrosion</th>
<th>Stress relieving</th>
<th>Machining</th>
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</thead>
<tbody>
<tr>
<td>HARDFACE BUF</td>
<td>O</td>
<td>-</td>
<td>Non-alloyed deposit Ideal for rebuilding of ferritic steel parts before hardfacing</td>
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<tr>
<td>TRI S 312</td>
<td>O</td>
<td>-</td>
<td>For dissimilar joints &amp; repair Type 312 stainless steel, exceptional cracking resistance</td>
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<tr>
<td>GAMMA 182</td>
<td>G / O</td>
<td>-</td>
<td>Nickel alloys for joining, cladding and repair Conforms to ENCrFe-3 classification for stick electrodes</td>
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<td>CAST NiCl</td>
<td>G / O</td>
<td>-</td>
<td>Welding of cast irons, FeNi deposit – 45% Ni</td>
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<tr>
<td>HARDFACE AP</td>
<td>G / O</td>
<td>200-240 HB 45-55 HRC</td>
<td>Work-hardening manganese alloys High rate of work-hardening, high impact, railway</td>
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<tr>
<td>HARDFACE TLN</td>
<td>O</td>
<td>300 HB</td>
<td>Low alloy, rebuilding and surfacing of mechanical components</td>
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<tr>
<td>HARDFACE L</td>
<td>O</td>
<td>56-59 HRC</td>
<td>The open-arc solution to weld parts subject to impact and metal to metal wear, self-tempering deposit for hardfacing</td>
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<tr>
<td>HARDFACE GP</td>
<td>G</td>
<td>55-60 HRC</td>
<td>The ideal partner for your out-of-position hardfacing jobs subject to impact and metal-metal wear</td>
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<td>ROBODUR K 600</td>
<td>G</td>
<td>600 HB</td>
<td>Seamless copper coated wire, abrasion and impact, self-tempering deposit</td>
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<td>HARDFACE TIC</td>
<td>O</td>
<td>57-60 HRC</td>
<td>The best solution against impact and abrasion, crack free, combined abrasion, high pressure impact</td>
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<td>HARDFACE HC</td>
<td>O/TE</td>
<td>58-64 HRC</td>
<td>Highly abrasion resistant Cr carbide deposit</td>
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<tr>
<td>HARDFACE HCNB</td>
<td>O</td>
<td>58-64 HRC</td>
<td>Highly abrasion resistant Cr carbide deposit, particularly impressive abrasion resistance in mono layer</td>
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<td>HARDFACE CNV</td>
<td>O</td>
<td>65 HRC</td>
<td>High resistance to abrasion and impact at high temperatures</td>
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<td>HARDFACE BCN</td>
<td>O</td>
<td>60-65 HRC</td>
<td>Ultra-hard Cr-free single layer for pure abrasion</td>
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<tr>
<td>HARDFACE NCWB</td>
<td>G / O</td>
<td>64-68 HRC</td>
<td>Ultra-hard single layer for superior abrasion resistance Can resist to elevated temperature up to 650-700 °C</td>
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<td>HARDFACE STAINCARBW</td>
<td>O</td>
<td>52-62 HRC</td>
<td>Extreme abrasion resistant weld deposit W-carbides deposit in a ‘soft’ corrosion resistant matrix.</td>
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<tr>
<td>HARDFACE NICARBW</td>
<td>G</td>
<td>52-62 HRC</td>
<td>Extreme abrasion resistant weld deposit W-carbides deposit in an outstanding corrosion resistant matrix</td>
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#### One step beyond with our Eleium range

- **Stick Electrodes**
  - The classic solution
  - Low heat input, moisture resistant coating, high deposition rate

- **Tubular Electrodes**
  - Suitable for all welding processes

- **Topcase 425-4**
  - All-terrain wire feeder suitcase transforming your welding process from SMAW to FCAW

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**HARDFACING lifetime (one layer deposit)**

ASTM G65 normalised tests

- **Heat treated plate 400HB**
  - Lifetime
  - ASTM G 65 - Weight loss (g)

- **HARDFACE HC-O**
- **HARDFACE HCNB-O**
- **HARDFACE CNV-O**
- **HARDFACE NCWB-O-G**

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**Joining / Repairing**

- Mineral abrasion
- Metal to metal abrasion
- High temperature Work hardening
- Impact
- Corrosion
- Stress relieving
- Machining

** Abrasion resistance**

- Suitable
- Highly suitable
- Perfectly suited

**Process**

- 5.00
- 10.00
- 15.00
- 20.00
- 25.00
- 30.00
- 35.00

**Heat treated plate 400HB**

- HARDFACE HC-O
- HARDFACE HCNB-O
- HARDFACE CNV-O
- HARDFACE NCWB-O-G
Our Technical ‘Spark’ Solves Your Industrial Challenges

WA Consumables
The go-to provider of advanced welding consumables

WA Machines
The go-to provider of engineered wear protection solutions

WA Integra™
The go-to provider of automated equipment for wear protection

A worldwide presence

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