DiaPac™ provides a full range of tungsten carbide – Nickel alloy blends for use in Laser Cladding and PTA welding.

These powder blends offer exceptional corrosion, oxidation and abrasion resistance. The nickel based alloy yields excellent corrosion properties with minimal dilution of the tungsten carbide particles. Application sectors include: mining, construction, agriculture and energy. Parts can be protected from abrasion and erosion while providing corrosion resistance in a repairable deposit.

Technical support is available for material selection:
- In-house wear testing; ASTM G65-04 (2010), ASTM B611-85 (2005), DiaPac’s Slurry Abrasion Test (SAT), DiaPac’s Erosion test incorporating different impingement angles and stress levels
- Mechanical testing including; Vickers Rockwell and Micro-Hardness
- Microscopy including; low power stereo microscopy, high power light microscopy, Image analysis, Scanning Electron microscopy, Electron Dispersive Spectroscopy (EDS) and Chemical Mapping

- Various mesh sizes and ratios for the tungsten carbide/nickel alloys are available to suit specific requirements
- Available carbides include spherical cast carbide (CCS), cast tungsten carbide (CCZ), mono tungsten carbide (WCZ), crushed WC/Co particles (SC), and spherical WC/Co particles (PL)
- Available nickel alloys include Ni-Si-Cr-B compositions with hardness range 30-60 HRC