PLASweld™ NiBasW60

Nickel-base powder with addition of tungsten carbides
for plasma arc surfacing

Classification

EN 14700

Z P Ni20

Field of use

The powder PLASweld™ NiBasW60 for plasma arc surfacing was especially developed for the highest levels of wear. Applications with abrasive, mineral, rolling or sliding wear and with high impact stress. Applicable to low-carbon steels and cast steels, excavator parts, tips, drilling tools, augers in the plastics and stoneware industry, mining, mechanical engineering, chemistry.

Chemical composition of the metal powder (typical values in weight %)

C	B	Fe	Si	Ni	W
2.2	1.3	0.5	1.3	37.5	balance

Properties

Mixed powder made out of spherical nickel-base matrix (gas-atomized) with angularly broken tungsten carbides in a special grain range composition. Layers made of PLASweld™ NiBasW60 show the highest level of wear resistance with abrasive and sliding wear, combined with good resistance against impact stress.

Melting point (matrix):	ca. 1060 °C
Melting point (WSC):	ca. 2750 °C
Specific weight (matrix):	8.1 g/cm³
Specific weight (WSC):	15.7 g/cm³
Hardness (matrix) at room temperature:	ca. 55 HRC
Hardness (hard materials) at room temperature:	ca. 2300 HV

Welding instruction

Preheating and interpass temperature should be adjusted to the base metal. To obtain the best weld metal properties, it is necessary to optimize the main and pilot arc, plasma gas, welding speed and distance, weave width and powder flow.

Availability

-180 + 63 µm in 5 kg powder containers

Further packaging size and grain size ranges on demand.