PLASweld™ NiBas776W40

NiCrMo-powder with addition of tungsten carbides
for plasma arc and laser surfacing

Classification

EN 14700

Z P Ni20

Characteristics and field of use

PLASweld™ NiBas776W40 is developed for hardfacing weld overlays subject to corrosion and abrasive wear. It can be welded on similar corrosion resistant nickel alloys as well as on stainless steels and low-alloyed steels.

PLASweld™ NiBas776W40 has a high carbide content. The weld deposit has an homogenous structure with high toughness which ensures good crack resistance. The weld deposit is stable over a large temperature range.

This powder blend is applicable on parts subject to regular wear such as separator screws or mining tools. PLASweld™ NiBas776W40 is also successfully used for additive manufacturing.

Typical analysis in %

C	Si	Mn	Cr	Mo	W	V	Fe	Ni
1.6	0.4	0.7	9	10	41	0.3	1.8	balance

Properties

Powder blend with spherical nickel base matrix and with tungsten carbides in special grain size composition.

Hardness at room temperature: Matrix approx. 510 $HV_{0.5}$
(WC/W_2C) approx. 2300 $HV_{0.5}$

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.

Preheating and interpass temperature (if necessary) have to be adjusted to the base metal to minimize cracking. To obtain the desired metal properties, it is necessary to optimize laser output, flow rate control of powder and powder gas, type and quantity of shielding gases, welding strategy, welding speed and weld distance.

Availability

-150 + 50 µm in 5 kg powder containers

Further packaging size and grain size ranges on demand.