

Characteristics and field of use

Due to its high hardness, PLASweld™ FerroV1 for laser surfacing is suitable for build-ups on machine parts and tools subject to abrasion, compression and impact.

The deposit is machinable by grinding or with tungsten carbide tools and it is heat-treatable.

PLASweld™ FerroV1 is developed as a powder with spherical particles for hardfacings. Finely divided carbides provide good fatigue strength and temperature wear resistance.

Surfacings are possible on similar hot-working steels, low and high-alloyed steels and corresponding cast steels. Typical applications are cutting and punching tools, press moulds and forming dies.

Chemical composition of powder blend (approx. values in weight %)

C	Si	Mn	Cr	Mo	V	W	Fe	Others
0.5	0.3	0.2	4.5	2.8	1.0	2.1	balance	<0,5

Properties

Specific weight: 7.9 g/cm³
 Hardness of pure weld metal deposit: 50 – 60 HRC

Welding instruction

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

-125 + 45 µm in 5 kg powder containers

Further packaging size and grain size ranges on demand.