



Cost effective deposits for wear and heat resistance

Maintaining excessive safety margin, to ensure application demands are met, is a costly exercise. Precision engineering optimises application demands and cost efficiently.

Parts exposed to wear at high temperatures are traditionally surface coated with cobalt based alloys. This ensures excellent functionality at a price.

Choose

Iron base powder for cost effective wear at high temperatures in engines and some chemical industry applications.

Engine valve seats and valves for cars, trucks and motorbikes are an industrial scale proven application.

Benefits

- Heat resistance to withstand hot abrasive wear
- Cost effective iron based alloy
- Complies with application demands for medium to small engines
- Crack generation does not occur
- Corrosion resistance to withstand engine environment
- Mechanical and welding properties comparable to cobalt 6 & 12 type materials

Powder	Hardness HRC*	Article nr.	Alloy base	Melting range °C	Particle Size (µm)
3533	33	114776	Fe	1220 - 1320	53-150
3533-10	40	114732	Fe	1220 - 1320	53-150
3733	33	117015	Fe	1220 - 1320	63-210
3733-10	40	117561	Fe	1220 - 1320	63-210

*Indicative alloy hardness/ typical when PTA tested

Packaging, 5 kg plastic bottle

Applications

PTA (plasma transferred arc) is ideal for high unit volume automated applications as seen with automotive valves and valve seats.

Outer edges must withstand wear at engine temperatures. These sensitive areas are protected so the main goods volume can be manufactured from steel. The table exemplifies cost effective consumables for engine applications.

Good wear resistance is achieved with Cr, Ni, and Mo carbides distributed in the ferritic matrix. Particle size range shown dominates for this equipment and application. Recommended for deposition on valve steels and low carbon steel parts.



Temperature °C	Hot Hardness* HV
20	HV ₃₀ 320 (33 HRC)
250	HV ₅ 280
500	HV ₅ 260
700	HV ₅ 230

*3533 / 3733 "as welded" hot hardness after PTA deposition.