

Ni-Fuse WC

Nickel-based hardfacing powders with tungsten carbides

Ni-Fuse WC powders are designed to **protect new parts and restore worn parts** exposed to abrasion and erosion, in order to extend their service life.

They combine a **self-fluxing nickel-based matrix** with **tungsten carbide particles**. The matrix ensures coating cohesion and carbide retention, reinforcing protection against abrasive materials.

PROPERTIES & APPLICATIONS

The Ni-Fuse WC range combines the **abrasion resistance and corrosion resistance of the nickel matrix** with the hardness of tungsten carbides, protecting the most highly stressed surfaces.

With **20 to 60% carbide content** and two available particle sizes depending on the grade, it allows the deposit to be adapted to the condition of the surface to be protected. These coatings are particularly suitable for applications where **abrasion is predominant and impact is limited**.

Typical applications: screws, flights, mixer blades, scrapers and anti-rotation elements, particularly in the brick & tile industry, mineral processing and abrasive material handling.

CHEMICAL COMPOSITION

References	Matrix hardness HRC	% Matrix	Matrix particle size μm	Typical WC microhardness Hv 0,1	% WC	WC particle size μm	Packaging
Ni-Fuse 602010 WC	60	80%	20-106	2000-2500	20%	45-90	5 kg container
Ni-Fuse 603510 WC		65%			35%	45-90	
Ni-Fuse 603515 WC		65%			35%	100-150	
Ni-Fuse 604010 WC		60%			40%	45-90	
Ni-Fuse 604015 WC		60%			40%	100-150	
Ni-Fuse 605510 WC		45%			55%	45-90	
Ni-Fuse 605515 WC		45%			55%	100-150	
Ni-Fuse 606010 WC		40%			60%	45-90	
Ni-Fuse 606015 WC		40%			60%	100-150	

APPLICATION

Ni-Fuse WC powders are applied using our **Ni-Fuse Spray™ torch**, supplied with powder and fitted with an adapted lance. **Spraying and fusing are carried out simultaneously**, allowing the hardfacing to be completed in a single operation on a previously prepared surface.

Fusion of the nickel matrix ensures bonding of the coating to the substrate and anchoring of the tungsten carbides.

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