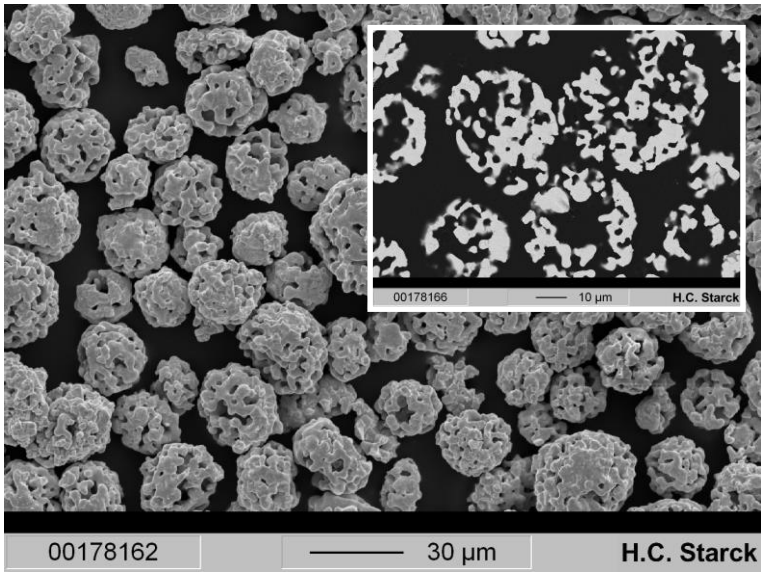
Technical Bulletin

AMPERIT® 512*

WC-Co 88/12 agglomerated sintered (low carbon)

***AMPERIT*® 512** is a special product for applications where coated parts are exposed to molten non-ferrous metals such as Zn and Galfan® used in Continuous Galvanizing Lines (CGL).



Powder Characteristics	
Chemistry [1] **(mass fraction in %)**	
Carbon (C)	max. 4.0%
Cobalt (Co)	10.0 – 12.0%
Tungsten (W)	Balance
Particle Sizes	
***AMPERIT*® 512.074**	45/15 µm
***AMPERIT*® 512.059**	30/5 µm

***AMPERIT*® 512** has been specifically developed for deposition by HVOF systems. Sprayed coatings are low in porosity providing effective substrate protection.

***AMPERIT*® 512** provides higher corrosion resistance against liquid metals compared to normal WC-Co grades.

***AMPERIT*® 512** contains stoichiometric η-phases of W-Co-C which shows less reactivity with molten metals compared to free metallic Co present in other spray powders and coatings.

JP-5000 Spray Parameters [2]	
Nozzle:	4 inch
Kerosene:	6.0 gph / 22,7 l/h
Oxygen:	1800 scfh / 792 nl/min
Feed rate:	75 g/min,
Stand-off:	380 mm

[1] The values and characteristics in this Product Bulletin are typical values only and do not constitute a specification. For the latest valid specification refer to the product data sheet.

[2] Starting parameters, may need to be further optimized depending on application. Spray parameters for other systems are available on request.

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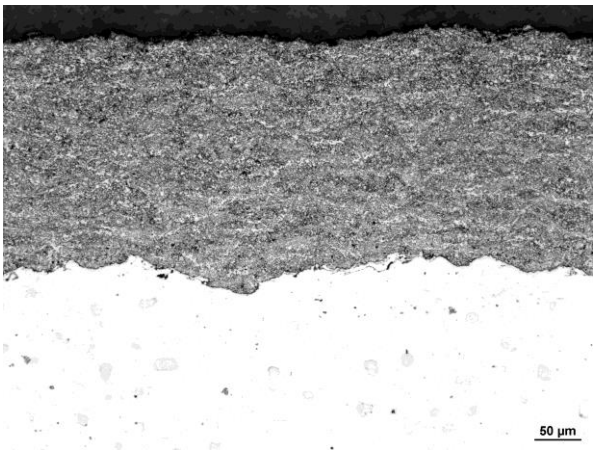

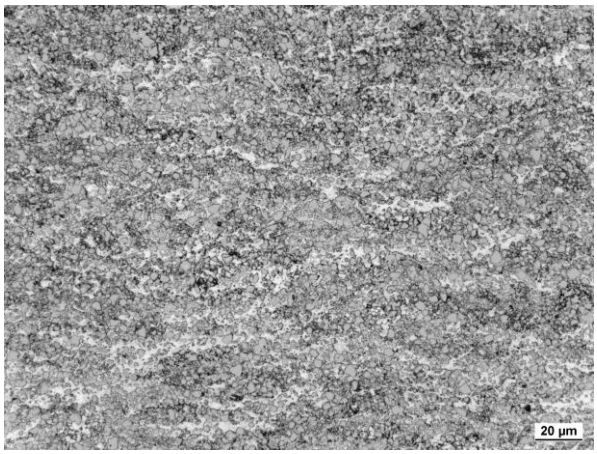

***AMPERIT*® 512.074**: Microstructure of the coating sprayed with JP-5000

Typical Properties of HVOF Coatings (JP-5000):

Hardness:	1100 - 1300 HV 0.3
Roughness Ra:	5 - 7 µm (as-sprayed)
Deposition efficiency:	approx. 42 %
Wear (ASTM G65, method E):	30 - 40 mg
Cavitation Rate:	20 - 30 mg/h

General Coating Properties

- No free metallic Co
- High resistance against molten metals such as Zn and Galfan®
- Dense coatings
- Excellent bonding

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Please contact your local Sales office for further information

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* Hazards identification in Advertising (Directive 67/548/EEC Article 26 and Directive 1999/45/EC Article 13): sensitising

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