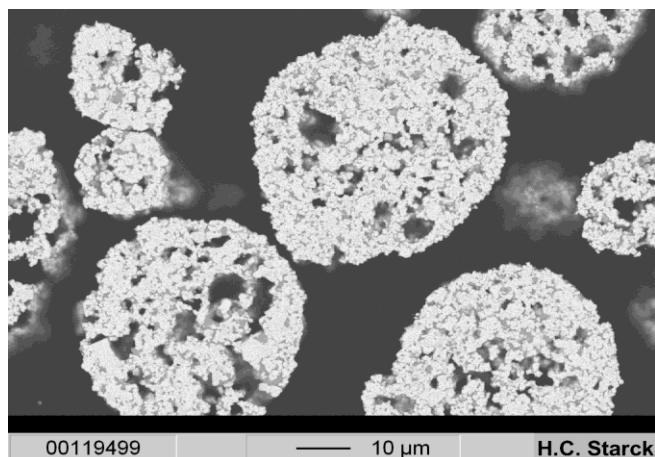
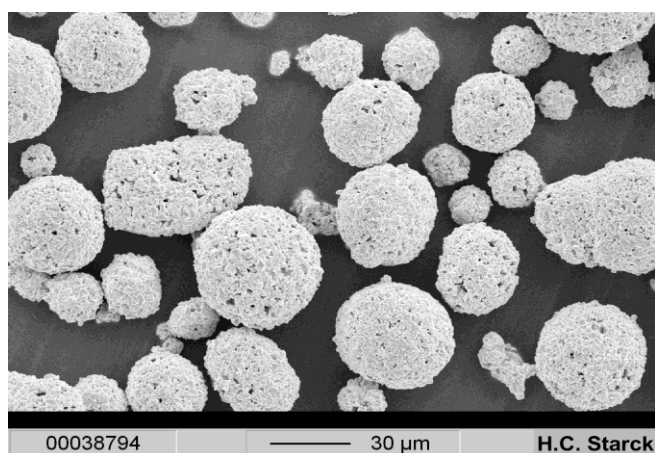


Technical Bulletin

AMPERIT® 547

WC-Ni 88/12, agglomerated and sintered

AMPERIT® 547 is a versatile, high quality powder with an extremely homogeneous distribution of the fine WC particles in the Ni matrix.



Powder Characteristics

Chemistry (mass fraction in %)

Carbon (C)	5.4 - 5.8	%
Nickel (Ni)	11 - 13	%
Iron (Fe)	Max 0.2	%
Tungsten (W)	Balance	%

Particle Sizes

AMPERIT® 547.059	30/5 µm
AMPERIT® 547.074	45/15 µm
AMPERIT® 547.088	53/20 µm
AMPERIT® 547.002	90/45 µm

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.

Issue 01/2016, valid from: Jan. 26, 2016

www.hcstarck.com

Technical Bulletin

AMPERIT® 547

WC-Ni 88/12, agglomerated and sintered

Physical Characteristics

Partical size distribution (by Laser light diffraction per ASTM C 1070)

Particle Size Distribution ¹⁾	547.059	547.074	547.088
	30/ 5 µm	45/15 µm	53/20 µm
-125 µm - 88 µm - 62 µm - 44 µm	100% min.99%	100%	100%
D 90% D 50% D 10%	25 - 33 µm 15 - 21 µm 9 - 13 µm	52 - 62 µm 30 - 38 µm 18 - 23 µm	60 - 70 µm 35 - 43 µm 21 - 25 µm
Apparent Density	4.7 - 5.6 ⁴⁾ g/cm ³	4.7 - 5.6 ³⁾ g/cm ³	4.7 - 5.6 ³⁾ g/cm ³

Particle Size Distribution ²⁾	547.002
	90/45 µm
+ 106 µm + 90 µm - 45 µm - 38 µm	max. 1% max. 5% max. 10% max. 5%
Apparent Density ³⁾	4.7 - 5.6 g/cm ³

1) MICROTRAC by Laser Light Diffraction per ASTM C 1070, 2) ROTAP Screening per ASTM B 214,

3) HALL FLOWMETER FUNNEL per ASTM B 212, 4) CARNEY FUNNEL per ASTM B 417

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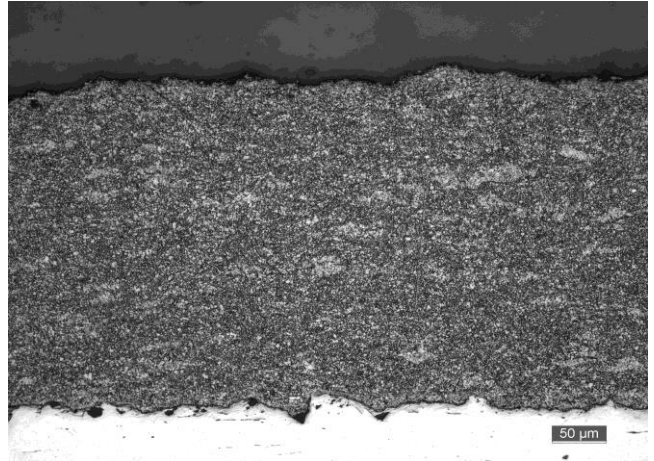
AMPERIT® 547

WC-Ni 88/12, agglomerated and sintered

Coating Properties

Exactly like most WC based powders coatings produced from **AMPERIT® 547** are highly resistant to abrasion, erosion and sliding wear.

AMPERIT® 547 should be considered if greater ductility than WC-Co coatings is required.



Typical Properties of HVOF Coatings:

Microhardness:	1100 – 1350 HV 0.3
Roughness Ra:	2.0 – 6.0 µm (as sprayed)
Porosity:	less than 2 %
Bond strength:	> 75 MPa
Deposition efficiency:	50 – 70 %

Maximum operating temperature: 500 ° C in air

Spray parameters are available for the most commonly used guns on request.
Please contact our technical support or your local sales office for further information.

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WC-Ni 88/12, agglomerated and sintered

Please contact your local sales office for further information

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Hazards identification in Advertising (Directive 67/548/EEG Article 26, Directive 1999/45/EC Article 13 and REGULATION (EC) No. 1272/2008 Article 48):

Carcinogenic Category 3; Sensitising; Toxic; Dangerous for the environment

Carcinogenicity Category 2; Skin sensitisation Category 1; Specific target organ toxicity - repeated exposure Category 1; Chronic aquatic toxicity Category 3

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