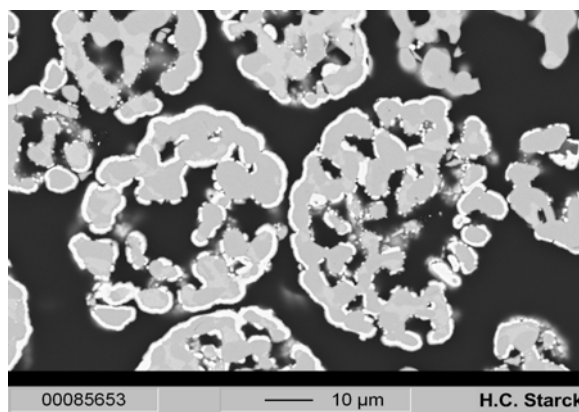
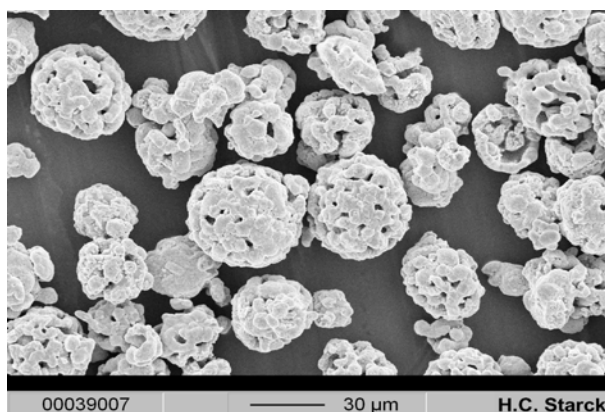


**AMPERIT<sup>®</sup> 584\*****Cr<sub>3</sub>C<sub>2</sub>-NiCr 75/25 agglomerated sintered**

**AMPERIT<sup>®</sup> 584** is a chromium carbide–nickel–chromium powder produced by agglomerating and sintering. The chromium carbide has an average size of 3 to 4 µm and is uniformly distributed in the nickel-chromium matrix.



**AMPERIT<sup>®</sup> 584** can be deposited by PLASMA, gas HVOF and liquid fuel HVOF systems.

**Chemical Characteristics**

(Mass fraction in %)

Nickel (Ni) 18.0 – 22.0 %  
Carbon (C) 9.0 – 11.0 %

Oxygen (O) max. 0.6 %  
Chromium (Cr) Balance

**Physical Characteristics**

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

	<b>584.1</b> <b>45/22 µm</b>	<b>584.054</b> <b>45/10 µm</b>	<b>584.072</b> <b>38/10 µm</b>	
- 88 µm	100	100	100	%
D 90 %	57 – 65	55 – 63	38 – 50	µm
D 50 %	33 – 41	31 – 39	22 – 30	µm
D 10 %	20 – 24	17 – 21	12 – 16	µm
+ 45 µm <sup>1)</sup>	max. 5	max. 5		%
+ 38 µm <sup>1)</sup>			max. 5	%
- 20 µm <sup>1)</sup>	max. 10			%
- 10 µm <sup>1)</sup>		max. 2	max. 5	%
Apparent Density	2.3 – 3.0 <sup>2)</sup>	2.3 – 3.0 <sup>2)</sup>	2.5 – 3.2 <sup>3)</sup>	g/cm <sup>3</sup>

Additional grain sizes/specifications: **AMPERIT<sup>®</sup> 584.077** 63/32 µm **AMPERIT<sup>®</sup> 584.281** GE B50A845 Cl. B

1) ALPINE Air Jet Screening, 2) HALL FLOW per ASTM 212, 3) HALL FLOW per ASTM B 417

## Coating Properties

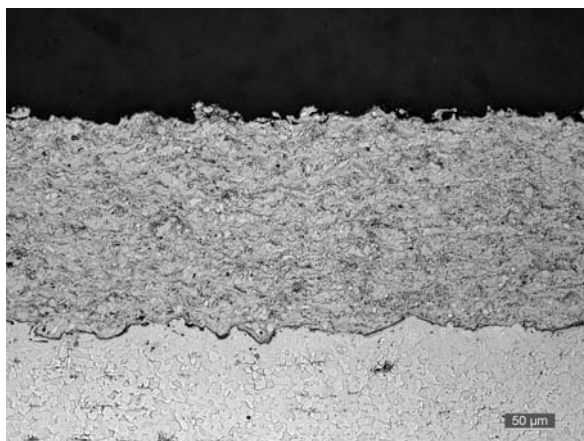
**AMPERIT® 584** is a Cr<sub>3</sub>C<sub>2</sub>-NiCr 75/25 material and should be used for high temperature applications, up to 870 °C, where standard WC based coatings do not meet the requirements regarding thermal stability, oxidation and corrosion resistance. In addition, **AMPERIT® 584** provides good protection against cavitation. Good sliding properties and high resistance against erosion at elevated temperatures are characteristics of all Cr<sub>3</sub>C<sub>2</sub>-NiCr materials.

### Typical Properties of HVOF Coatings:

Microhardness: 900 – 1100 HV 0.3  
Roughness Ra: 3.0 – 6.0 µm (as sprayed)  
Porosity: less than 2 %  
Bond strength: > 70 MPa  
Deposition efficiency: 45 – 65 %

Maximum operating temperature: 870 °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.



The values and characteristics in this Product Information are typical values only and do not constitute a specification.

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

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