

# Soft Magnetic Alloy Powder

## \*Fe-Si-Cr (Molding )

Composition	Item NO.		Particle size	Perm.(10KHz)		Q Factor (1MHz)	Density (g/cm <sup>3</sup> )
				u	H @109Oe		
Fe-5.5Si-4.5Cr	HSCA-50		30um	50	64%	>35	>6.4
	HSCA-4S	Coating		40	72%		
	HSCA-40A		20um	45	65%	>45	>6.2
	HSCA-40AS	Coating		39	68%		
	HSCA-40B		15um	47	64.5%	>45	>6.2
	HSCA-40BS	Coating		40	73%		
	HSCA-40		10um	43	72%	>90	>6.2
	HSCA-3S	Coating		36	79%		
	HSCA-30		5um	38	78%	>110	>6.2
	HSCA-2S	Coating		32	85%		

Composition	Item NO.		Particle size	Perm.(10KHz)		Q Factor (1MHz)	Density (g/cm <sup>3</sup> )
				u	H @109Oe		
Fe-3.5Si-6.5Cr	HSCB-50		30um	47	65%	>40	>6.4
	HSCB-4S	Coating		37	75.5%		
	HSCB-40		10um	40	73%	>100	>6.2
	HSCB-3S	Coating		33	80%		
	HSCB-30		5um	37	76%	>110	>6.2
	HSCB-2S	Coating		33	82%		

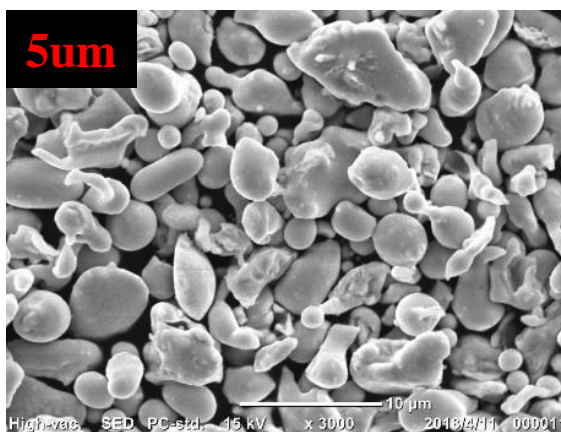
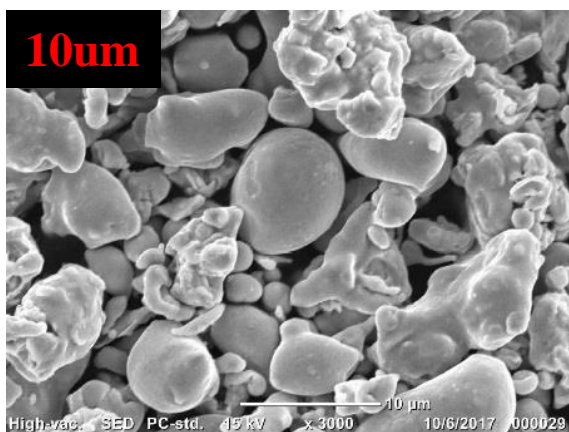
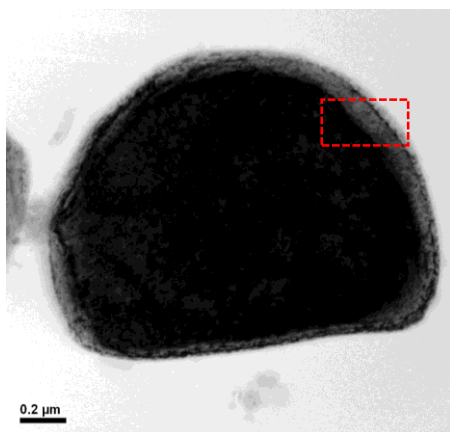
### 【 Example of preparation of testing core 】

Binder : 1.2 wt% Epoxy  
 T core size : OD 18mm\*ID 10mm  
 Drying Temperature:150°C

### 【 Example of magnetic data 】

Permeability : MICROTEST LCR METER & 10KHz-0.5V-12T

\*Surface modification layer provides high insulation resistance and Breakdown Voltage, Conform to TEM, the surface modification layer thickness  $\leq 50\text{nm}$



# Soft Magnetic Alloy Powder

**\*Fe-Si-Cr (High temperature sintering/multi-layer)**

Item NO.		Particle size(um)		Perm.(10KHz)			Q Factor (1MHz)	Density (g/cm <sup>3</sup> )
		D50	D100	u	H @109Oe	L(20%)		
HSCB-M9	Coating	3.8	<9	29	>16%	126 Oe	>100	>5.8
HSCB-M9S				24	>9%	190 Oe	>95	>5.8
HSCA-M7*		2.4	<8					
HSCA-M5*		1.0	<5					

\*under development

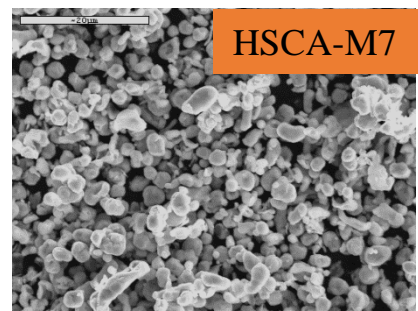
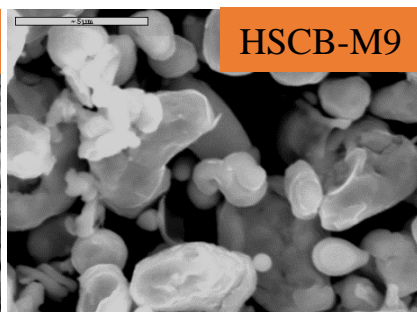
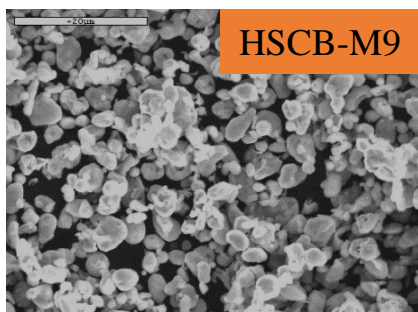
**【 Example of preparation of testing core 】**

Binder : 2.5 wt% Epoxy  
 T core size : OD 18mm\*ID 10mm  
 Drying Temperature:150°C

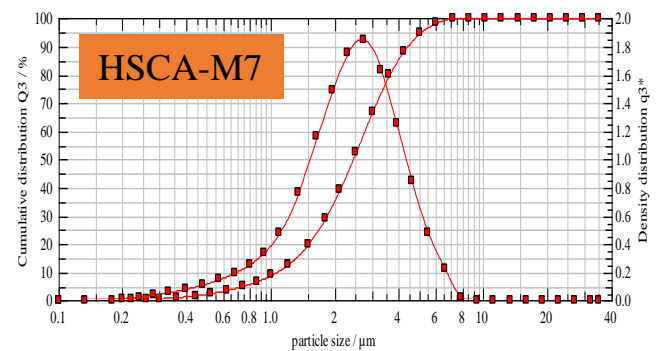
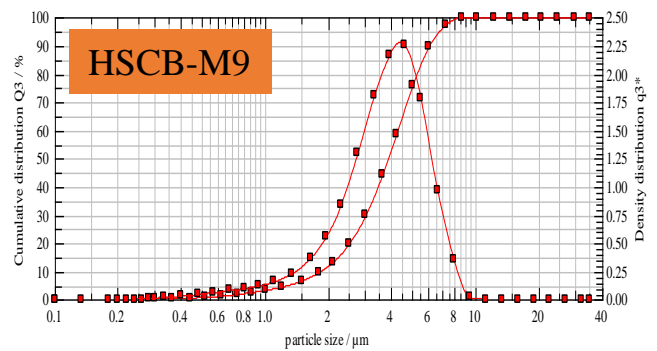
**【 Example of magnetic data 】**

Permeability : MICROTTEST LCR METER &  
 10KHz-0.5V-12T

\*Surface modification layer provides high insulation resistance and Breakdown Voltage



**Particle size distribution**



**Advantages:**

- Good current resistance
- Surface modification, powder has high Hi-port & high insulation resistance
- Small particle size distribution, miniaturization trend of power inductor application
- Can be applied to molding & multilayer processes
- Can provide products with different composition and different particle size distribution



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