

# Mector® HQ Series

## HQ Series High Q Value Absorbent Powder

Mector® HQ High-Q-Factor Series Wave-Absorbing Powder is mainly composed of Fe-Si-based soft magnetic alloys. Tailored for high-frequency and other diverse application fields, it is manufactured by adding corresponding alloy elements through optimized design. Flaking processing is adopted to adjust complex permeability  $\mu$  and complex permittivity  $\epsilon$ . The powder features low magnetic loss  $\mu''$  in the MHz range and a  $\mu'$  peak near 13.56 MHz. As the frequency rises to the GHz band, its natural vibration frequency matches electromagnetic wave frequency, triggering natural resonance or domain-wall resonance to significantly enhance electromagnetic wave absorption. Wave-absorbing materials made from this powder are mainly applied to magnetic isolation and anti-interference solutions for NFC, as well as EMI noise suppression solutions around the GHz band.

### Product Features & Advantages

Excellent rust resistance and high saturation magnetic flux density;  
Low loss at MHz frequencies, outstanding wave-absorbing performance from 0.5 GHz to 3.2 GHz, suitable for a wide range of frequency bands;  
Halogen-free and eco-friendly, complying with EU RoHS Directive, REACH and other regulatory requirements.

### Typical Applications

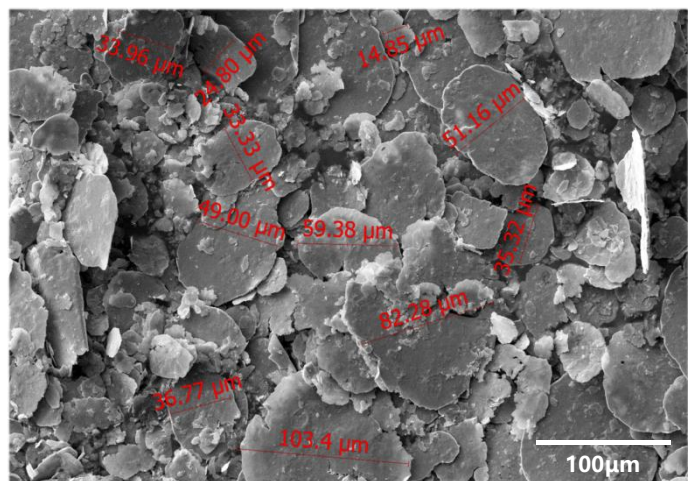
Wave-absorbing materials and coatings; end-use products: NFC/WPC, RFID modules;  
Anti-interference for laptop GPU, DDR, USB and drone cameras.

### Supply Form

25 kg per drum;  
Please provide model and packaging requirements upon inquiry.

### Usage Method

Permeability is measured by preparing 100  $\mu\text{m}$ -thick magnetic sheets with 50 vol.% powder loading;  
Direct application is available based on customer-specific conditions.

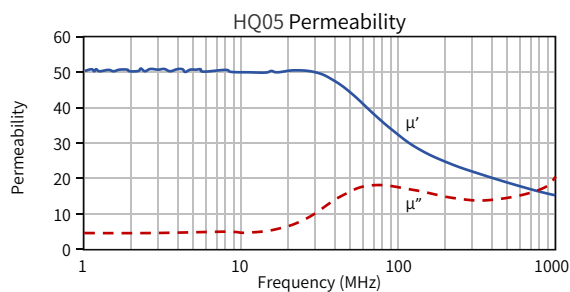
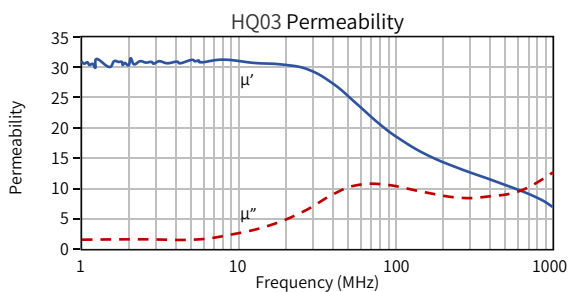


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Item	HQ03	HQ05	Test Standard
A.D (g/cm <sup>3</sup> )	0.6 - 1.0	0.6 - 1.0	GB/T 1479.2-2011
T.D (g/cm <sup>3</sup> )	0.9 - 1.3	0.8 - 1.3	GB/T 5162-2006
D10 (μm)	2 - 10	5 - 15	GB/T 19077.1-2008
D50 (μm)	15 - 25	25 - 35	GB/T 19077.1-2008
D90 (μm)	50 - 70	65 - 85	GB/T 19077.1-2008
Permeability $\mu'$ @3MHz	25 - 35	40 - 60	GB/T 32596-2016
Operating frequency (Hz)	Sub-6G	Sub-6G	GB/T 32596-2016
Shipping specifications (customizable)	25 kg/barrel		
Storage conditions	5 - 40°C/ (60±10) %RH		
shelf life	36 months		

Note: The data provided is solely for the reference of design engineers. The performance mentioned above represents the performance range of the series of products. Variations may occur in different models of products and in different application environments. Engineers should conduct tests based on the actual environment.



### Coding Rules

## HQ 03 - X

① ② ③

- ① Product category: HQ = high Q value
- ② Permeability: 03=30 permeability
- ③ Special code: such as different formula systems or special requirements