



ANPING COUNTY HUIRUI WIRE MESH FACTORY

Epoxy Coated Wire Mesh – Professional Support Mesh for Hydraulic & Heavy-Duty Filters

1. Company Overview

Anping County Huirui Wire Mesh Factory (Hui Rui Siwang) is a professional manufacturer based in Anping – the famous “Hometown of Chinese Wire Mesh” in Hebei Province, China. With more than 15 years of focused experience, we specialize in high-quality wire mesh, metal foam and epoxy coated support mesh for filtration applications. Our factory operates advanced production lines (including 120 woven mesh machines and 18 expanded mesh lines), maintains ISO 9001 quality management, and exports over 95% of products to customers in Europe, North America, Southeast Asia, the Middle East and Africa.

We have established long-term cooperation supplying epoxy coated wire mesh to Japanese brand filter manufacturers, including continuous supply to Yamashin production facilities in the Philippines and Vietnam. This proven track record demonstrates our ability to meet the quality, consistency and delivery requirements of international filter OEM and aftermarket producers.

2. Product Introduction – Epoxy Coated Wire Mesh

Epoxy Coated Wire Mesh is a critical support / backing layer used inside hydraulic filter elements, air filters and fuel filters for excavators, loaders, bulldozers, mining equipment and industrial hydraulic systems. It is manufactured by electrostatic spraying of high-performance epoxy resin powder onto precision plain-woven Q195 low-carbon steel or Al5154 aluminum alloy mesh, followed by controlled high-temperature curing. The resulting coating provides excellent oil resistance, strong adhesion, corrosion protection and the flexibility needed for high-speed pleating while maintaining structural integrity under high differential pressure and vibration.

Major global filter companies (including Donaldson, Parker, MANN+HUMMEL and their supply chains) commonly use epoxy-coated metal wire mesh as the support layer for Microglass / synthetic media packs. This material has become the industry standard replacement for pure stainless steel mesh in many cost-sensitive yet performance-critical applications because of its superior cost-performance balance.



Actual product photos – Black Epoxy Resin Coated Wire Mesh rolls

3. Common Industry Specifications (Hydraulic Filter Support Mesh)

The following specifications are the most widely used by filter element manufacturers worldwide for hydraulic and heavy-duty applications. We can produce all of them and also customize according to your drawings or samples.

Mesh Count	Wire Diameter	Base Material	Coating	Typical Application
18 × 14	0.18 mm	Q195	Black Oil-Resistant	Hydraulic filter (most common)
18 × 14	0.16 mm	Q195	Black Oil-Resistant	Hydraulic / high open area
22 × 20	0.18 mm	Q195	Black Oil-Resistant	Hydraulic filter
12 × 10	0.25 mm	Q195	Black Oil-Resistant	Heavy support / high strength
18 × 16	0.18–0.23 mm	Q195 / Al5154	Black / Gray	Hydraulic & Air filter
18 × 14	0.21 mm	Al5154	Black / Weather	Air filter / dual use
17 × 15	0.26 mm	Al5154	Gray Weather	Air filter
16 × 16 / 20 × 20 / 24 × 24 / 30 × 30	0.15–0.25 mm	Q195 / SS / Al	Custom	Custom filter projects

Additional Standard Parameters

Parameter	Range / Value	Notes
Coating Thickness	20–60 µm (typical 25±5 or 35±5 µm)	Avg ~46 µm in our recent test report
Powder Loading	20–35 g/m²	Controlled for uniform coverage
Width	20–1500 mm (up to 1600 mm available)	Slit strips also available
Roll Length	30–1000 m (common 100–500 ft)	Long continuous rolls possible
Color	Black (standard), Gray, White, Custom	Oil-resistant black most popular
Operating Temperature	-40 °C to +150 °C	Suitable for hydraulic oil environments
Weave	Plain weave	Tight interlock, good pleating

4. Why These Specs Are Preferred by Major Filter Makers

- 18×14 / 0.18 mm is the global “workhorse” specification for hydraulic filter support layers – balances open area, strength and cost.
- Q195 base + oil-resistant epoxy coating is optimized for continuous immersion in hydraulic oils (mineral and synthetic).
- Coating thickness 25–45 µm provides reliable corrosion protection without excessive aperture reduction.
- Soft, flexible mesh surface is compatible with both blade-type and gear-type high-speed pleating machines (A2Z, JCEM, Rabofsky, etc.).
- Proven dimensional stability under pressure cycling and vibration – critical for excavator and construction equipment filters.

5. Third-Party Test Results (Recent Reports)

We maintain up-to-date third-party inspection reports. Below are key results from recent CNAS/CMA laboratory testing on our Epoxy Resin Coated Wire Mesh (all items judged PASS):

Test Item	Standard / Method	Result	Judgement
RoHS (Pb / Cd / Hg / Cr(VI))	RoHS 2011/65/EU + (EU) 2015/863	Pb 55 mg/kg; Cd/Hg N.D.; Cr(VI) Negative	PASS
Surface Appearance Quality	GB/T 17492-2019	Uniform coating, no blistering / peeling / holes	PASS
Dry Film Coating Thickness	GB/T 13452.2-2008	36–58 μm , average 46 μm	PASS
Pencil Hardness	GB/T 6739-2022	2H (no scratch or substrate exposure)	PASS
Cross-Hatch Adhesion	GB/T 9286-2021	Grade 0 (zero peeling after tape)	PASS
Coating Flexibility	180° bend over 3 mm mandrel	No cracking or flaking	PASS
Mesh Size Deviation	GB/T 17492-2019	Within specified limits	PASS
Wire Diameter / Weave Structure	GB/T 17492-2019	Tight interlock, no abnormal deformation	PASS
Mass per Unit Area	GB/T 17492-2019	Deviation within $\pm 4\%$	PASS

Full original reports (UCT CNAS & LCS) can be provided immediately upon request.

6. Key Advantages for Filter Element Producers

- Proven oil resistance and adhesion – Grade 0 cross-hatch and 2H hardness confirmed by third-party lab
- Excellent pleating performance on high-speed equipment – soft surface, stable coating, no powder drop
- Cost-effective alternative to full stainless steel support mesh while meeting hydraulic oil immersion requirements
- Consistent quality suitable for OEM supply chains of major brands (Donaldson, Parker, MANN+HUMMEL supply network)
- Long-term successful supply experience to Japanese brand (Yamashin) filter production in Philippines & Vietnam
- RoHS compliant and ready for European / North American market requirements
- Flexible MOQ, fast sampling and reliable lead time (typically 7–15 working days for standard specs)

7. Customization & Service Capability

We can fully customize mesh count, wire diameter, coating thickness, color, roll width, roll length and slit width according to your filter design or existing sample. Technical support is available for matching current production parameters (blade-type or gear-type pleaters). Free samples and detailed technical data sheets are provided for evaluation.

8. Typical Applications

- Hydraulic return-line, pressure-line and suction filters for excavators, loaders, bulldozers and cranes (CAT, Komatsu, Hitachi, Volvo, SANY, etc.)
- OEM and aftermarket filter elements for construction, mining and agricultural machinery
- Industrial hydraulic power units and mobile equipment filtration systems
- Air filter and fuel filter support layers where oil/chemical resistance is required
- Any pleated filter element requiring a stable, oil-resistant, cost-effective metal support mesh

9. Packaging & Logistics

Standard export packing uses moisture-proof paper + PE film + strong carton or wooden case/pallet to ensure the mesh arrives clean and undamaged. We support FOB, CIF and other common trade terms. Documentation (commercial invoice, packing list, certificate of origin, test reports) is prepared professionally for smooth customs clearance worldwide.

10. Next Steps – How We Can Support You

1. Send us your current mesh specification, sample or filter drawing – we will match or optimize it.
2. Request free samples of our most popular 18×14/0.18 and other grades for laboratory and production-line trials.
3. Ask for full third-party test reports and a competitive quotation based on your estimated annual volume.
4. Discuss long-term supply agreement, safety stock or local warehouse options if needed.

Contact Information

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We look forward to becoming your reliable long-term partner for epoxy coated support mesh.

Samples • Full Test Reports • Competitive Quotations • Fast Delivery