

EDM Graphite Electrode

In Europe, more than 90% of EDM electrode materials are graphite. Copper used to be the mainstream electrode material; however, it has lost most of its competitive advantages when compared with graphite electrodes.

Advantages of Graphite Electrodes

1. **Higher processing efficiency:** Graphite machining speed is generally 2-5 times faster than copper, while its EDM spark-erosion speed is 2-3 times higher.
2. **Excellent deformation resistance:** This benefit stands out for thin-wall electrodes. Copper has a softening point of approximately 1000 °C and tends to deform under heat. By contrast, graphite features a sublimation temperature up to 3650 °C, with thermal expansion coefficient merely 1/30 that of copper.
3. **Low weight:** Graphite density is only one-fifth of copper. For large-size EDM electrodes, it effectively lowers machine load and is well-suited for large-scale mold manufacturing.
4. **Lower electrode wear:** During EDM processing, carbon atoms separated from spark oil adhere to the graphite electrode surface under high-temperature conditions, forming a protective film that offsets electrode consumption.

Product Range & Services

Saw-cut Service

We provide saw-cutting service to process graphite blocks into your required dimensions with optimal graphite grades matched to your working conditions. Please contact us to discuss your target sizes and material grades.

Browse our online catalog to explore our complete graphite product portfolio and supporting services.

EDM graphite electrode

Index	Units	FSWH-5	FSWF-5	FSW-7	FSW-8	FSK-5S	FSK-7	FSK-8	FSK-9
Bulk density	≥g/cm ³	1.68	1.78	1.85	1.91	1.85	1.83	1.86	1.9
Electric resistivity	μΩ.m	13	9-10	11-13	11-13	8-10	11-14	10-14	10-14
Compressive strength	Mpa	86	85	115	135	80	110	120	125
Flexural strength	Mpa	38	43	51	60	40	50	55	60
Shore hardness		51	56	65	70	55	67	72	75
Ash content/	ppm	500/50	500/50	500/50	500/50	500/50	500/5	500/50	500/5

purification							0		0
Average granularity	μm	14-15	14-15	8-10	8-10	15	8	6	2-4
Coefficient of thermal expansion	×10 ^{-6/°C}	5	5.5	5.6	5.85	4.8	3.8	4	3.9
Young's modulus	Gpa	8.8	10.3	11	12	10	11	12	12

Product Name	Industry	Application
Crucible, Boat, Dish, etc.	Metallurgy	Melting, refining and analysis
Dies, Molds, Ingot Chassis, etc.		EDM graphite electrodes, semiconductor manufacturing, iron, steel and nonferrous metal making, continuous casting, metallurgy pressing machine
Graphite Roller, etc.		Heat treatment of steel plate in furnace
Conduit, Skateboard, etc.		Aluminum molding
Graphite Pipe		Guard pipe for measuring temperature, blowpipe, etc
Graphite Block		Masonry furnace and other heat resistance material
Chemical Equipment	Chemistry	Heat exchanger, reaction tower, distillation columns, absorption equipment, centrifugal pumps, etc
Electrolytic Plate		Salt solution and baking molten salt electrolyte
Electrolytic Mercury		NaCl electrolyte
Grounded Anode		Electrical anticorrosion
Motor Brush	Electricity	Commutator, slipping ring
Current Collector		Skate, slide, trolley
Contact		Switches, relays
Mercury Ferry And Electronic Pipe	Electronics	Anode, grid pole, repeller pole, ignition pole of the Mercury rectifier and anode, grid electrode
Graphite Bearing	Machinery	High temperature resistance sliding bearing
Sealing Element		Sealing ring, stuffing box seal, packing seal
Product Element		Braking in plane and vehicle

FAQ

1. When can i get the price?

We usually quote within 24 hours after getting your detailed requirements,like size,quantity etc. .

If it is an urgent order, you can call us directly.

2. Do you provide samples?

Yes, samples are available for test our quality.

Samples delivery time will be about 7-10 days.

3.What about the lead time for mass product?

The lead time is based on the quantity,production time about 7-12 days.For graphite product,apply Dual-use items license need about 45working days.

4.What is your terms of delivery?

We accept FOB, CFR, CIF, EXW, etc. You can choose the most convenient way for you. Besides that, we can also shipping by Air and Express.

5. Product packaging?

We are packed in customized wooden case, or according to your requirements.

Hope to cooperation with you,Thanks !