

Removal object

Turbidity

SS

Fe

Anthracite Filter Media

Anthracite Filter Media are filtration materials for turbidity and SS removal. Since the specific gravity is lighter than that of Filter Sand, it is much used in combination with Filter Sand in dual-media filtration, to consist reverse grain layers after backwashing. In addition, because of high content carbon of this product, it has high resistance to various chemicals and high physical strength so that it is widely used for city and industrial water purification.



Features of Anthracite Filter Media

1. High void percentage and much removal capacity of turbidity and SS.

In the "Single-medium filtration" treated by Filter Sand only, small particles are placed at upper part of layer, called as "Surface filtration" that turbidity and SS are caught at surface layer part mainly, and it results in less removal capacity of turbidity and SS. By use of Anthracite Filter Media of which the specific gravity is lighter than that of Filter Sand and even bigger particles can be placed on the Filter Sand, it is possible to enlarge the removal capacity of turbidity and SS as ideal "Dual-media filtration" in

combination with Filter Sand and it is widely used in many water works in Japan. Since Anthracite Filter Media, being rich angular and complicated in form, have high void percentage and large specific area, "Deep bed filtration" which is effective not only at the surface but also to the depth can be realized and it is also used with single and deep layer.

From these features, the filtration will be effective by use of Anthracite Filter Media as follows.

- Extending filter run length to lower washing water waste and improve treated water collection.
- Possible to quicken filter run length to save space for installation of equipment.
- Prevention of filtration blockage due to *Synedra*, *Microcystin*, etc.
- Prevention of mad ball forming at the surface of sand layer.

2. Micro-flocs growing easily.

Since the grain has complicated form and angularities, suspended solids are retained in the inter granular spaces throughout the greater part of layer depth. After addition of coagulant, the water to be treated which has been sent out the

filter without agitation is agitated and generates micro-flocs while it passes through the inter granular space. It results in improvement of treated water quality.

- Improvement of treated water quality.

3. Easy change from single-medium filtration (by use of Filter Sand) to dual-media filtration.

The washing method of Anthracite Filter Media is the same as that of Filter Sand. It is no need to install new washing equipment additionally in case of changing the existing filter from single-medium filtration by only use of Filter Sand to dual-media

filtration by use of Anthracite Filter Media together. It is possible to improve the filtration effect by removing a part of Filter Sand and fill up with Anthracite Filter Media there.

- Improvement of filtration effect with reasonable budget.

4. High resistance to chemicals

Since anthracite of good quality contains less impurities and much carbon and it is not dissolved in acidic and alkaline water,

it is suitable as a filter medium and also used in the chemical industry for the filtration of brine in soda manufacturers.

- Possible to use with various chemicals.

5. Being used as a carrier for bio film treatment.

Since Anthracite Filter Media have high void percentage and large specific area, bio film is easily formed on them. The

medium is the most suitable not only for physical filtration but also as a carrier for bio film treatment.

- High effect as a carrier for bio film treatment.

Standard products of our Anthracite Filter Media

Effective Size (mm)	0.7	0.8	1.0	1.2	1.5	2.0	2.5	3.0	4.0
Uniformity Coefficient	1.5 maximum or 1.4 maximum								
Appearance	Granular								
Producing center	Hongai, Vietnam								

Note: We have a large assortment of products in conformity with the Selecting standard of Anthracite Filter Media for tap water use. At your request, we can manufacture Anthracite Filter Media of other Effective Sizes and Uniformity Coefficient. Please understand that there are tolerances included in the above Effective Sizes.

Packing 30L in a PP woven bag, 1m³ in a flexible container bag (Palletizing available)

Quality standard of our Anthracite Filter Media

	Our product sample No. 1	Our product sample No. 2	Quality standard (JWWA A103-2:2006)
Specific gravity(g/cm ³)	1.42	1.46	1.40 to 1.60
Friability (%)	0.85	1.22	3.0 maximum
Solubility in HCl (%)	0.65	0.78	6.0 maximum

Main characteristic example of Hongai anthracite

	Constant moisture (%)	Ash (%)	Volatile matter (%)	Sulfur (%)	Fixed carbon (%)	Calorific value (MJ/kg)
Hongai coal	5	5 to 7	5 to 7	0.6	88	1,880 to 1,980

Anthracite is the coal of highest carbonization in the classification of coal. The world-wide distribution of anthracite field covers U.S.A., China, Vietnam, Russia, South Africa, etc. In Japan, it had been also mined in Amakusa and Omine, but at present, Japanese industries have been relying totally upon the import from foreign countries. Anthracite having higher carbonization with good quality in the world is Hongai coal in Vietnam among them. We have the Hongai factory in Vietnam and we also manufacture Anthracite Filter Media of good quality in Japan derived from Hongai coal as raw material, being ready to deliver the product so that you can use it safely for tap water use.

