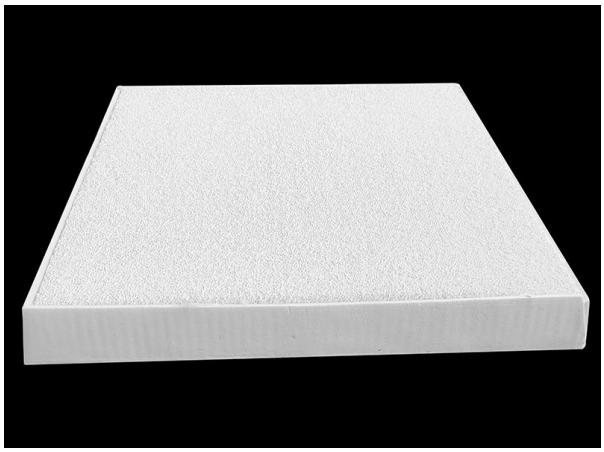
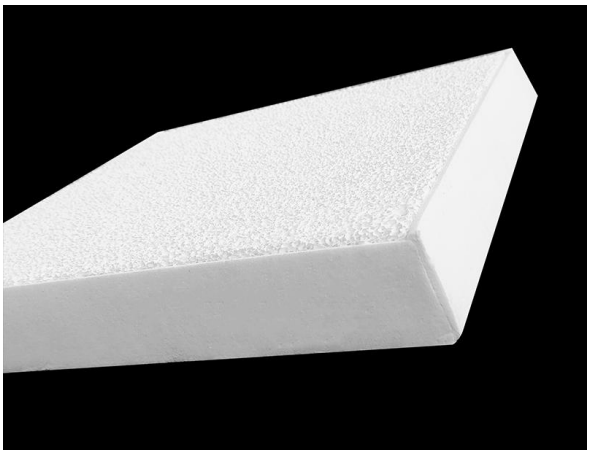
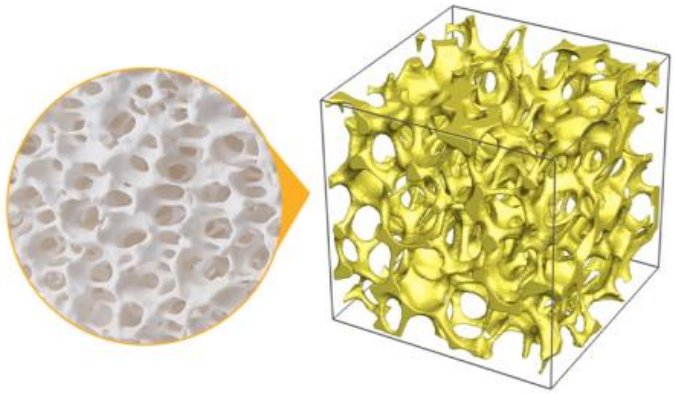
# Alumina Ceramic Foam Filter







10P/20P/30P/40P/50P/60P

The quality of the aluminum melt is very important, it affects the subsequent processing performance and the quality of the final product to a great extent.Therefore, various countries in the world attach great importance to the purification of aluminum molten. There are many reasons for the aluminum molten pollution, on the one hand, in the process of smelting, aluminum exposed to molten or partially molten state to the furnace atmosphere, liable to oxidation, easy to react with water vapor and absorb hydrogen, easy to form various forms of non-metallic slag (such as furnace lining pieces and flux of chloride, carbide, etc.) and bulky intermetallic compound particles, and so on. On the other hand, part of the waste material in the composition charge is carried with some non-aluminum impurities in the circulation process. As the waste comes from the factory's process waste and waste and off-site waste, so the path is different, the composition is complex, the quality is poor. These impurities often cause bubbles and inclusions in the billet, which seriously affect the purity of the metal melt, thus further affecting the machining property, mechanical property, corrosion resistance and appearance quality of the product.

The alumina ceramic foam filter supplied by our company can effectively remove all kinds of inclusions

with fineness up to micron level in aluminum water, making aluminum water into a smooth laminar flow, which is beneficial to mold filling. It has good mechanical strength and chemical stability, superior resistance to aluminum water erosion performance. A stable filtration effect can be obtained by strictly controlling hole size and porosity. The ceramic foam filter plate is surrounded by a sealed thermally expanded ceramic fiber liner, which facilitates the sealing of the filter plate inside the filter box to ensure that there is no metal liquid side flow.

**Feature:**

*High strength, no slag, good thermal shock resistance.
*High porosity, excellent filtration result.
*Sizes complete, 7 inch to 26 inch, 10PPI to 70PPI.
*Sealing gasket: fiber paper , fiber cotton and expandable cotton.

## 1、Use effect:

Using ceramic foam filter plate to purify aluminum liquid has brought great benefits to the strip foil and its products (such as pot blank, car finishing material, PS printing plate, etc.). For the manufacturers of aluminum alloy sections, there are several obvious advantages as follows:

1.Increase extrusion productivity
2.Extend the life of the die and reduce the number of die repairs.
3.Reduced extrusion pressure
4.The surface quality of the aluminum section was improved significantly.

## 2、Alumina ceramic foam filter technical data

| Item | Index |
|---|---|
| Porosity(%) | 80~90% |
| Working Temperature | ≤1100°C |
| Bending Strength(Mpa) | 0.6 |
| Compression Strength(Mpa) | 0.8 |
| Thermal Shock Resistance | 1100°C---room temperature 6 times |
| Volume Density | 0.35-0.45 g/cm3 |

## 3、Alumina ceramic foam filter selection

In general, choose alumina ceramic foam filter should take into account the requirements of finished product quality, flow capacity of molten aluminum tank, the amount of the total filtration of molten aluminum and aluminum liquid cleanliness and other factors.
Choice of alumina ceramic foam filter as follows, it is just for customer reference.

| Specification（mm） | Dimension mm | Pore sizes ppi |
|---|---|---|
| 7*7*2 | 178*178*50 | 20/30/40/50/60 |
| 9*9*2 | 228*228*50 | 20/30/40/50/60 |

| | | |
|---|---|---|
| 12*12*2 | 305*305*50 | 20/30/40/50/60 |
| 15*15*2 | 381*381*50 | 20/30/40/50/60 |
| 17*17*2 | 432*432*50 | 20/30/40/50/60 |
| 20*20*2 | 508*508*50 | 20/30/40/50/60 |
| 23*23*2 | 584*584*50 | 20/30/40/50/60 |
| 26*26*2 | 660*660*50 | 20/30/40/50/60 |

**4、Alumina ceramic foam filter filtration capacity**

| Specification（mm） | Filter flow range (kg/min) | Total filtration (T) |
|---|---|---|
| 7 inch （178*178*50） | 25-50 | 3 |
| 9 inch （228*228*50） | 35-90 | 6 |
| 12inch （305*305*50） | 90-170 | 15 |
| 15inch （381*381*50） | 147-280 | 20 |
| 17inch （432*432*50） | 193-367 | 25 |
| 20inch （508*508*50） | 274-521 | 30 |
| 23inch （584*584*50） | 369-700 | 35 |
| 26inch （660*660*50） | 467-862 | 40 |

**5、Method of application of alumina ceramic foam filter**

1. Clean the aluminum filter box, keep it clean and intact.

2. Put the ceramic foam filter into filter box carefully, press sealing gasket around, avoid molten aluminum dispersing or floating away.

3. Use electric or gas to preheat filter box and ceramic foam filter evenly 15-30 min, make the temperature next to the molten aluminum, ceramic foam filter preheating temperature should surpass 460℃, expansion cotton will seal after heating, it makes ceramic foam filter steady in molten aluminum, preheating makes ceramic foam filter pores open and avoid occlusion expansion and contraction.

4. Observe change of molten aluminum pressure, control the flowing molten aluminum needed, normal start pressure: 100-150mm, the pressure falls down below 75-100mm when molten aluminum flowing, it will grow later.

5. Do not shock and beat ceramic foam filter in filtration. Control molten aluminum flow rate in launder.

6. Take our ceramic foam filter and clean filter box after filtration.