



Foundry Technologies



Ceramic foams have many potential advantages,

such as high temperature strength, high resistance to chemical attack, high refractoriness and good insulating characteristics. Molten metal, particularly aluminum and its alloys, in practice generally contains a lot of entrained nonmetallic inclusions, which are considered to be sources causing casting defects. The entrained nonmetallic inclusions are particles that are present virtually in all metals and alloys.

Depending on the shape, size, number and distribution, the inclusions can influence the mechanical properties of the metal and alloys, and subsequently the quality of the finished product. The use of conventional gating systems is not sufficient to hold up enough slag and nonmetallic inclusions into the final casting. In order to obtain the high quality castings, it is necessary to adopt ceramic foam filters.





Silicon Carbide Based

Technical Specifications

Content	SiC
Color	Gri
Porosity (ppi)	8-40
Temperature (max)	1530°C
Compressive Strenght (MPa)	1
Bulk Density (g/cm ³)	0,55±0,1



Silicon carbide based filters used for gray and sphero iron castings and they are also used for aluminum, copper alloys. They are very effective removing the inclusions and show extra resistance to thermal shocks. Maximum application temprature is 1530°C

Dimensions (mm)	10 PPI				20 PPI	
	Capacity (kg)	Flow Rate (kg/sec)	Capacity (kg)	Flow Rate (kg/sec)	Capacity (kg)	Flow Rate (kg/sec)
	Grey Casting		Sphero Casting		Grey Casting	
40 x 40 x 15	68	4	34	3	53	2
40 x 40 x 22	68	4	34	3	53	2
50 x 50 x 22	110	6	55	4	85	3
50 x 75 x 22	152	9	76	5	116	5
75 x 75 x 22	212	14	106	9	162	7
100 x 100 x 22	420	23	210	13	315	12
Ø x 40 x 20	64	4	39	3	49	2
Ø x 50 x 20	82	5	41	3	61	2
Ø x 60 x 20	112	7	56	4	87	3
Ø x 70 x 20	156	9	78	5	118	4
Ø x 80 x 20	200	12	100	7	150	6



Zirconium Based Ceramic

Technical Specifications

Content	ZrO2
Color	Yellow/White
Porosity (ppi)	8-20
Temperature (max)	1750°C
Compressive Strength (MPa)	1,5
Bulk Density (g/cm ³)	1,25±0,1



Zirconium based ceramic foam filters can filter all types of steel. They provide high quality casting with its mechanical strength and high resistance to thermal shocks. These filters are resistant to high temperatures up to 1750°C

Dimensions (mm)	10 PPI	
	Capacity (kg)	Flow Rate (kg/sec)
40 x 40 x 15	39	1,7
40 x 40 x 22	39	1,7
50 x 50 x 22	55	2,6
50 x 75 x 22	72	39
75 x 75 x 22	80	5,7
100 x 100 x 22	120	9,8
Ø x 40 x 20	25	1,5
Ø x 50 x 20	46	2
Ø x 60 x 20	69	2,9
Ø x 70 x 20	94	3,9
Ø x 80 x 20	110	5





Alumina Based Filter

Technical Specifications

Content	Al2O3
Color	White
Porosity (ppi)	10-60
Temperature (max)	1280°C
Compressive Strenght (MPa)	0,8
Bulk Density (g/cm ³)	0,45±0,1



Al2O3 Alumina based filters used for filtration of non-ferrous metals like aluminium, copper, magnesium, zinc, etc. Extensively used for removing inclusions and refractor materials from molten aluminium. Maximum application temprature is 1280°C

Dimensions (mm)	10 PPI		20 PPI		30 PPI	
	Capacity (kg)	Flow Rate (kg/sec)	Capacity (kg)	Flow Rate (kg/sec)	Capacity (kg)	Flow Rate (kg/sec)
40 x 40 x 15	30	1,7	20	1,5	17,6	1
40 x 40 x 22	30	1,7	20	1,5	17,6	1
50 x 50 x 22	48	2,6	32	2,2	27,5	1,5
50 x 75 x 22	72	3,9	49	3,3	41	2,2
75 x 75 x 22	108	5,7	73	4,9	62	3,4
100 x 100 x 22	193	11	130	8	110	6
Ø x 40 x 20	29	1,5	21	1,2	16	0,9
Ø x 50 x 20	37	2	25	1,6	22	1,1
Ø x 60 x 20	54	2,9	38	2,2	31	1,8
Ø x 70 x 20	74	3,9	50	3,2	41	2,4
Ø x 80 x 20	96,5	5	65	4	59	3,1





Alumina Based Filter

Technical Specifications

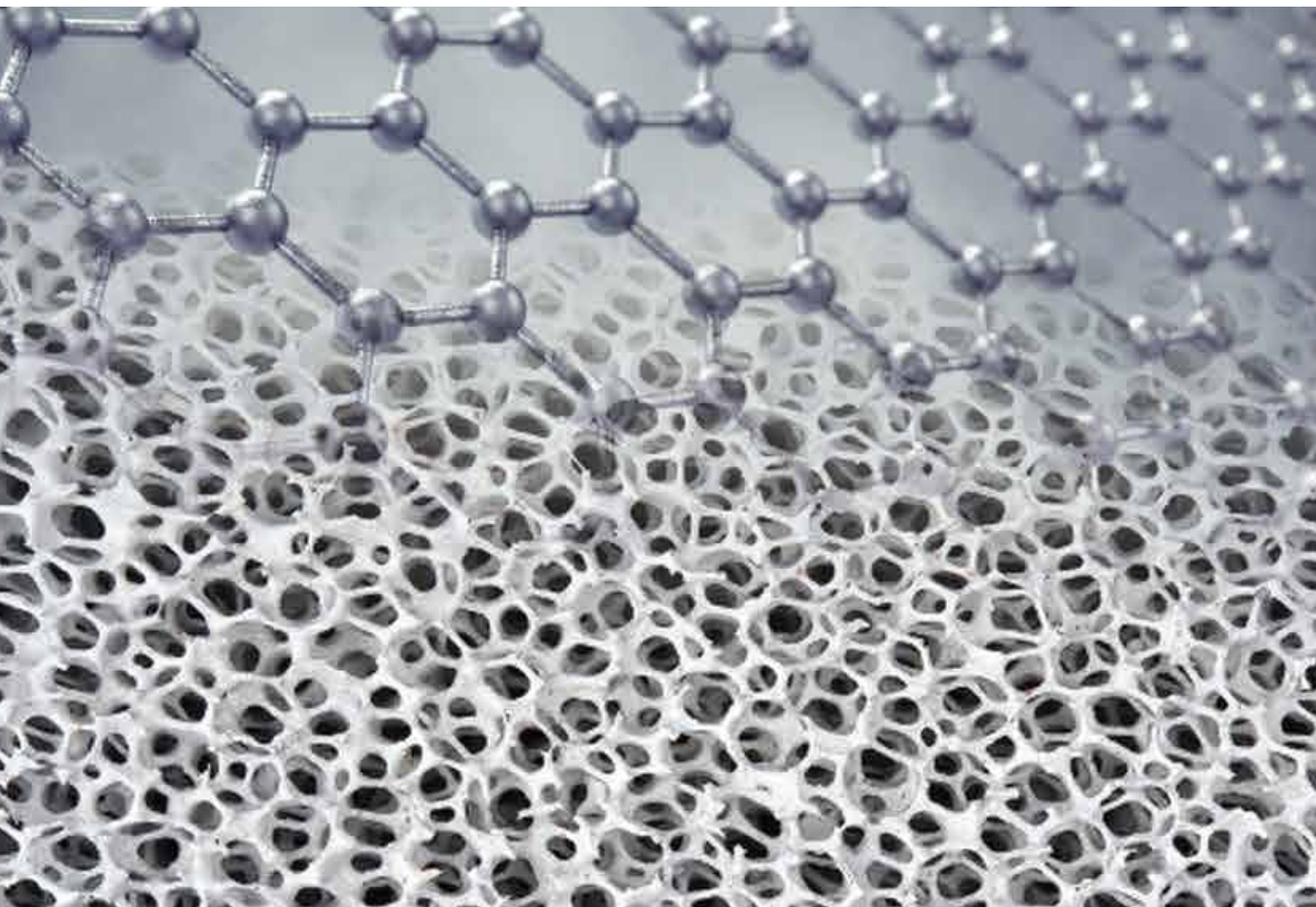
Content	Al2O3
Color	White
Porosity (ppi)	30-60
Temperature (max)	1200°C
Compressive Strenght (MPa)	0,8
Bulk Density (g/cm ³)	0,45±0,1



Ceramic foam filter for aluminium casthouse filter is available in sizes from 9" to 23" with requested porosity (ppi) to meet the requirements. The side areas of the filters are insulated with an expandable gasket or 6 mm ceramic fiber gasket.

Dimensions		Height (mm)	Porosity (PPI)	Flow Rate (kg/min)	Capacity (ton)
inc	mm				
7"x7"	178x178	50	30x60	20-80	8
9"x9"	229x229	50	30x60	25-120	10
12"x12"	305x305	50	30x60	50-240	15
15"x15"	381x381	50	30x60	70-360	25
17"x17"	432x432	50	30x60	100-480	30
20"x20"	508x508	50	30x60	270-530	35
23"x23"	584x584	50	30x60	360-700	40
26"x26"	660x660	50	20x30	550-900	50





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