



SIVEX NON PHOSPHATE (NP)

CERAMIC FOAM FILTER

SIVEX® Non Phosphate (NP) ceramic foam filters are used to filter and clean aluminium used for beverage can applications, aircraft alloys and especially alloys with high magnesium levels. They are a proven, cost effective way to remove inclusions from aluminium melts. These filters are machined to tight dimensional tolerances, are treated during processing and have very low friability. SIVEX NP is a combination of excellent strength, thermal properties and resistance to molten aluminium attack.

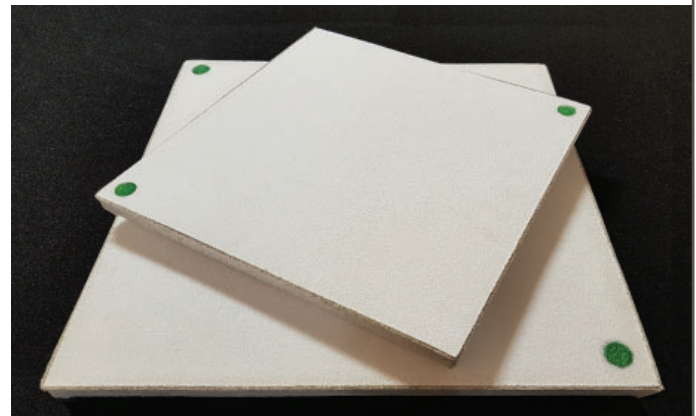
SIVEX NP is a silica-bonded, high-purity alumina-based product. It is available in sizes from 17.8–66 centimetres (7–26 inches) and in filter grades of 10–80.

SIVEX NP has a gasket on the edges to help seat the filter in the filter bowl and ensure no metal bypasses the filter. Two types of gaskets are available; a standard fibre gasket that is 48 millimetres (1.89 inches) wide and 6 millimetres (0.24 inches) thick and a sureseal expandable gasket that is 48 millimetres (1.89 inches) wide and 3.5 millimetres (0.14 inches) thick.

PRODUCT SPECIFICATIONS–CELL SIZE

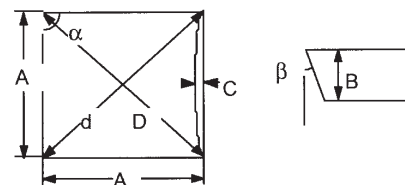
Filter efficiency is related to filter cell size. By carefully controlling cell size within the filter, a more consistent filtration performance can be achieved. Typically, inclusion removal efficiency increases as filter cell size and the metal velocity in the filter decrease.

Filter Grade	Minimum Cell Size–microns (mil)	Maximum Cell Size–microns (mil)
10	3800 (150)	5100 (201)
20	2300 (91)	2900 (114)
30	1640 (65)	2170 (85)
40	1250 (49)	1470 (58)
50	900 (35)	1120 (44)
65	710 (28)	860 (34)
80	600 (24)	700 (28)



PRODUCT SPECIFICATIONS–DIMENSIONS

Dimensional accuracy ensures a correct fit in the filter bowl and prevents metal bypass or stresses on the filter.



Filter Sizes (Dimension A)–mm (in)	
±2 mm (0.08 in)	178 x 178 (7 x 7)
	229 x 229 (9 x 9)
	305 x 305 (12 x 12)
	381 x 381 (15 x 15)
±3 mm (0.12 in)	432 x 432 (17 x 17)
	508 x 508 (20 x 20)
	584 x 584 (23 x 23)
±4 mm (0.16 in)	660 x 660 (26 x 26)

Property	Specification
Angle α	90° ±0.5°
Angle β	17.5° ±0.5°
B	50 mm ±2 mm (2 in ±0.08 in)
Bend C	±1.5 mm (±0.06 in) on each edge
D-d	≤0.6% x A





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PRODUCT SPECIFICATIONS–TYPICAL APPLICATIONS

The following tables provide capacity and flow rates for each filter size. For increased flow rates, two (or more) filters are used in parallel. The capacity data displayed should only be used as a guide. Actual filter capacity depends on the project's casting conditions (alloy, temperature, inclusion load, etc.).

Filter Size–mm (in)	Effective Filter Area–m ² (ft ²)	Minimum Flow–kg/min (lb/min)	Maximum Flow–kg/min (lb/min)	Typical Capacity–tonnes (tons)
178 (7)	0.02 (0.22)	25 (55.12)	48 (105.82)	2.70 (2.98)
229 (9)	0.03 (0.32)	47 (103.62)	90 (198.42)	5.10 (5.62)
305 (12)	0.07 (0.75)	90 (198.42)	172 (379.20)	9.80 (10.80)
381 (15)	0.12 (1.29)	147 (324.08)	280 (617.29)	15.90 (17.53)
432 (17)	0.16 (1.72)	193 (425.49)	367 (809.10)	20.80 (22.93)
508 (20)	0.23 (2.48)	274 (604.07)	521 (1148.61)	29.50 (32.52)
584 (23)	0.30 (3.23)	369 (813.51)	700 (1543.24)	39.70 (43.76)
660 (26)	0.40 (4.31)	492 (1084.67)	933 (2056.91)	53 (58.42)

Quantity Per Pallet for Standard Pallets (Truck Loads)

Filter Size–mm (in)	Filters Per Box	Filters Per Pallet	Pallet Dimensions–cm (in)	Pallet Weight–kg (lb)
178 (7)	10	480	113 x 132 x 160 (44 x 52 x 63)	416 (917)
229 (9)	10	480	113 x 132 x 190 (44 x 52 x 75)	694 (1530)
305 (12)	10	300	113 x 132 x 205 (44 x 52 x 81)	670 (1477)
381 (15)	5	180	113 x 132 x 190 (44 x 52 x 75)	613 (1351)
432 (17)	5	160	113 x 132 x 205 (44 x 52 x 81)	670 (1477)
508 (20)	5	105	113 x 132 x 185 (44 x 52 x 73)	730 (1609)
584 (23)	5	90	113 x 132 x 205 (44 x 52 x 81)	750 (1653)
660 (26)	4	48	113 x 132 x 160 (44 x 52 x 63)	495 (1091)

PRODUCT SPECIFICATIONS–QUANTITY PER PALLET FOR CONTAINER LOADS

Packaging can be modified to meet individual project requirements.

Filter Size–mm (in)	Pieces Per Pallet
178 (7)*	480
229 (9)*	480
305 (12)*	300
381 (15)*	180
432 (17)*	160
508 (20)*	105
584 (23)*	90
660 (26)**	48

* 8 pallets in a 6 metre (20 foot) container. 16 pallets in a 12 metre (40 foot) container.

** 16 pallets in a 6 metre (20 foot) container. 32 pallets in a 12 metre (40 foot) container.

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