

## Datasheet - Vulcasil AI

### High Alumina Insulating Refractories

### VULCASIL AI

Vulcasil AI is a range of high alumina insulating refractory materials, for use as hot face linings at high temperatures and in atmospheres containing hydrogen.

Manufactured in high purity bubble alumina with insulation properties up to 1850°C, these materials offer unrivalled quality for the most arduous applications.

Available in standard brick shapes and special shapes for bespoke applications.



Property	Typical			Units	Method
	Vulcasil A94I	Vulcasil A99I	Vulcasil A99HPI		
Bulk density	1.5	1.8	1.9	g/cm <sup>3</sup>	ASTM C20
Apparent porosity	55	55	55	%	ASTM C20
Cold crushing strength	10	15	12	MPa	ASTM C133
Thermal conductivity at 1200°C	1.1	1.4	1.5	W/m°C	ASTM E1461
Maximum Service Temperature	1800	1850	1850	°C	
Composition					
Alumina	94	99.3	99.6	Wt.%	XRF
Silica	5.5	0.4	0.2		
Other	0.5	0.3	0.2		

**Disclaimer:** Any advice, opinion, recommendation or information is given to assist the use of the company's products. **The end user must ensure the suitability of the product for their specific application.** In particular the company cannot accept liability for loss or damage which may arise from the incorrect use of its products or from poor workmanship on the part of the user. Please refer to Vulcan terms and conditions for full terms.



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Vulcasil A94I is a 94% bubble alumina insulating material with a MST of 1800°C. Ideal for the hot face of high temperature kilns in the manufacture of technical ceramics, refractories and metal powders. Offering good thermal shock resistance and stability at very high temperatures. Vulcan Refractories manufacture this material in a wide variety of shapes and sizes.



Vulcasil A99I is a +99% bubble alumina insulation material designed for use in reducing atmospheres such as hydrogen where the presence of silica is not permitted. Its resistance to hydrogen attack at high temperatures makes it ideal for use in bright annealing furnaces where Vulcan Refractories have unrivalled experience. Vulcasil HI 99 is also used as a backup lining in ammonia reformers and in areas where high purity insulation is required up to 1850°C.

Vulcasil A99HPI is the purest alumina insulation material available. It is designed for use in the most stringent applications where the presence of silica is a major concern. A maximum silica level of 0.3% makes this the material of choice in pure hydrogen atmospheres used in the high end bright annealing furnace market. Vulcan Refractories have supplied this material for many years with great success.

