



## Alumina-Silica Blanket Type ASB

### General Information

ZIRCAR Ceramics' Alumina-Silica Blanket Type ASB is a mechanically-needled ceramic-fiber blanket that exhibits good handleability and strength, has low shot content and is easily cut. Low in density with very good chemical stability, ASB Blankets provide low thermal conductivity in numerous high-temperature laboratory and aggressive industrial environments.

Two varieties are available:

**ASB-2300** is made from spun  $\text{Al}_2\text{O}_3$ - $\text{SiO}_2$  refractory ceramic fibers (RCF) and is capable of long service life in applications with temperatures to  $1260^\circ\text{C}$  ( $2300^\circ\text{F}$ ).

**ASB-2600** is made from spun  $\text{Al}_2\text{O}_3$ - $\text{SiO}_2$ - $\text{ZrO}_2$  refractory ceramic fibers (RCF) and exhibits extended service life in applications with temperatures to  $1427^\circ\text{C}$  ( $2600^\circ\text{F}$ ).

Both ASB-2300 & ASB-2600 are ideal for use as furnace insulation in sintering, heat treating and chemical thermal process systems.



### Characteristics & Properties

Type	ASB-2300	ASB-2600
Typical Composition, %		
$\text{Al}_2\text{O}_3$	45	30
$\text{SiO}_2$	55	54
$\text{ZrO}_2$	0	16
Other Oxides	<0.5	<0.1
Maximum Use Temperature*, °C (°F)	1260 (2300)	1427 (2600)
Fiber Diameter, microns	2.5-3.5	3.5
Linear Shrinkage‡, % 8 pcf blanket after 25 hrs at:		
1260°C (2300°F)	3.3	2.1
1426°C (2600°F)	-	5.1
Fiber Specific Gravity, g/cc (pcf)	2.73 (170.4)	

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Technical Data Bulletin  
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## Characteristics & Properties Continued

Specific Heat, J/kg °K (BTU/lb °F) 1093°C (2000°F)	1130 (0.27)	
Thermal Conductivity** of Standard Blankets, W/m°K (BTU/hr ft² °F/in)		
Bulk Density, kg/m³ (pcf)	96.11 (6)	128.15 (8)
260°C (500°F)	0.06 (0.45)	0.05 (0.39)
538°C (1000°F)	0.13 (0.94)	0.11 (.78)
816°C (1500°F)	0.24 (1.70)	0.18 (1.13)
1093°C (2000°F)	0.40 (2.80)	0.29 (2.02)

The data presented herein is intended to help the user to determine the appropriateness of this material for their application.

This data is a nominal representation of this product's properties and characteristics and therefore should not be used in preparing specifications.

\* Maximum use temperature is dependent on variables such as stresses, both thermal and mechanical, and the chemical environment that the material experiences. \*\* Properties expressed parallel to thickness. ‡ Properties expressed perpendicular to thickness.

## Suggested Applications

Primary thermal insulation in low-mass furnaces and thermal process systems operating to 1260°C (2300°F) for ASB-2300 and 1427°C (2600°F) for ASB-2600.

Backup thermal insulation in furnaces, solid oxide fuel cells and thermal process systems operating to high temperatures.

General high-temperature furnace repair. Expansion joint insulation. Thermal insulation in hot appliances.

Investment casting mold wrappings.

Soaking pit seals.

Glass furnace crown insulation.

Nuclear insulation applications.

Forge furnaces.

ASB Blankets can be layered between rigid insulation, wrapped around process piping, or fabricated into folded modules. They are also useful as insulation packing in furnace spaces, around furnace sight tubes and ports, and to fill in expansion joints and masonry cracks.

## Availability of Standard Blanket

ITEM #	DESCRIPTION
D3110	ASB-2300, 6 PCF, 24" W x 25' L x 1"T
D3120	ASB-2300, 6 PCF, 24" W x 12.5' L x 2"T
D3130	ASB-2300, 8 PCF, 24" W x 25' L x 1"T
D3150	ASB-2600, 8 PCF, 24" W x 25' L x 1"T
D3160	ASB-2600, 8 PCF, 24" W x 12.5' L x 2"T

## To Order

**Standard items:** order online or specify quantity, item # and description.

Standard items are available for immediate shipment from stock.

**Custom** size rolls, sheets and die-cut shapes are available upon request.



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