



Denka Alcen Blankets

Product Data Sheet

Product Description

Denka Alcen Blankets are made from high alumina fibers using the sol-gel process. They are double needed for exceptional strength and flexibility for use in applications up to 2912°F (1600°C) in oxidizing, reducing and chemically aggressive atmospheres.

Features

- Low linear shrinkage up to 2912°F (1600°C)
- Low thermal conductivity
- Excellent resistance to Alkali and chemical attack
- Excellent compression resistance and resiliency

Type

- Polycrystalline Wool (PCW)

Applications

- Reheat Furnace Linings
- Galvanizing Furnace Linings
- Reducing Atmosphere Furnace Linings
- Aluminum Furnaces
- High Firing Ceramics Kiln Linings

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| Properties | Denka Alcen NBK80 | Denka Alcen NBK95 |
|---|----------------------|----------------------|
| Fiber Class | PCW | PCW |
| Physical Properties | | |
| Color | White | White |
| Classification Temperature, °F | 2912 | 2912 |
| Classification Temperature, °C | 1600 | 1600 |
| Melting Temperature, °F | >3632 | >3632 |
| Melting Temperature, °C | >2000 | >2000 |
| Density, pcf | 6, 8 | 6 |
| Density, kg/m ³ | 96, 128 | 96 |
| Fiber diameter, µm | 3 - 5 | 3 - 5 |
| Linear shrinkage, % | | |
| After 24 hrs, isothermal heating @ 2500°F (1371°C) | <1 | <1.5 |
| After 24 hrs, isothermal heating @ 2912°F (1600°C) | <1.5 | <2.5 |
| Chemical Analysis, % weight basis after firing | | |
| Alumina, Al ₂ O ₃ | 80 | 95 |
| Silica, SiO ₂ | 20 | 5 |
| Other | trace | trace |
| Thermal Conductivity, BTU•in/hr•ft²•°F, per ASTM C201 | | |
| <u>Density, pcf</u> | <u>6</u> | <u>6</u> |
| 500°F | 0.38 | 0.38 |
| 1000°F | 0.74 | 0.74 |
| 1500°F | 1.30 | 1.30 |
| 2000°F | 2.07 | 2.07 |
| 2500°F | 3.04 | 3.04 |
| Thermal Conductivity, W/m•K, per ASTM C201 | | |
| <u>Density, kg/m³</u> | <u>96</u> | <u>96</u> |
| 260°C | 0.05 | 0.05 |
| 538°C | 0.11 | 0.11 |
| 816°C | 0.19 | 0.19 |
| 1093°C | 0.30 | 0.30 |
| 1371°C | 0.44 | 0.44 |

Product Availability

Denka and Alcen Blankets are manufactured and available globally, but packaging, density and thickness vary by region. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

Whilst the values and application information in this datasheet are typical, they are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials - Thermal Ceramics.