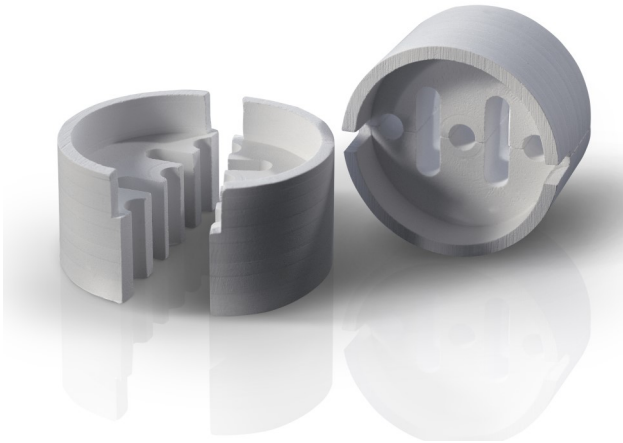
WDS® Shape

Product Data Sheet



Product Description

WDS Shape is a rigid and compact microporous insulation board with an engineered mineral matrix specifically designed to deliver excellent machining, stapling and mechanical properties.

Like any other microporous insulation of our industrial range produced with our exclusive WDS Technology process, WDS Shape features extremely good handling and machining properties; the very low thermal conductivity coefficient provides very good insulating properties with reduced thickness, allowing to design equipment where the highest energy efficiency, space optimization and reduction of weight are premium factors to be considered.

Features

- Best-in-class superior machining properties it provides in the entire temperature spectrum up to its classification temperature.
- Not affected by thermal shock
- Improved product mineral matrix core features minimal dust release and very good handling and machining abilities
- Low dustiness in comparison to conventional microporous insulators
- Specifically designed for superior and complex machining allowing to produce high quality machined components

Benefits

- Dimensionally stable up to maximum continuous use temperature
- Helps to control energy efficiency and heat flow very precisely
- Excellent for complex machining
- Increases effective volume inner capacity or reduces encumbrance in equipment and apparels of any kind.
- Environmentally friendly

Applications

- Electronic devices
- Measuring equipment insulation components
- Data storage media systems
- Insulation for laboratory instruments
- Heating elements in the cooking industry

Environmental and Health Safety

WDS Shape does not contain any hazardous or decomposition substance according to the EU Directive 2006/1907/EEC and IARC. The fibers or filaments used as reinforcement of the mineral core are also exonerated from any classification as defined by the WHO (World Health Organization) and EU Directive 97/69/EC.

Resistance to Moisture and Water

WDS Shape has a porous surface therefore it is sensitive to all liquids that can wet it; this includes substances such as water, oil and petroleum spirit, since they can densify the pore structure. Non condensed moisture does not affect the product.

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Properties	WDS Shape
Classification Temperature, °C (°F)	950 (1742)
Density, kg/m^3 (pcf), nominal	325 (20.3)
Cold Compression Strength, MPa (psi), ASTM C 165	>0.34 (49.3)
Linear Shrinkage, %, ASTM C 365	
Full soak, 950°C (1742°F), 24 hours	<3.0
Full soak, 1000°C (1832°F), 24 hours	<4.5
Single side soak, 1000°C (1832°F), 12 hours	<1.0
Chemical Analysis, %	
Silica, SiO_2	40-60
Zirconium silicate ZrSiO	35-55
Others	0-5
Thermal Conductivity, W/m•K (BTU•in/hr•ft^2•°F), ASTM C 177	
200°C (392°F)	0.025 (0.173)
400°C (752°F)	0.031 (0.215)
600°C (1112°F)	0.037 (0.257)
800°C (1472°F)	0.042 (0.291)

Shelf Life

- WDS Shape has unlimited shelf life if it stored properly
- WDS Shape must be handled and stored in dry conditions
- WDS Shape is resistant to diffusion by atmospheric humidity (water vapor) proving condensation is avoided

Standard Dimensions and Availability

Dimensions, mm (in)	Thickness, mm (in)
1000 x 650 (39.37 x 25.59)	10, 12, 15, 17, 20, 25, 30, 35, 40, 45, 50 (0.4, 0.5, 0.6, 0.7, 0.8, 1, 1.18, 1.37, 1.57, 1.77, 2)

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