

Data sheet

WDS® Shape

ENGLISH

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.

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.

Features

- Best-in-class amongst other market solutions within the same classification temperature and similar chemistry, for the 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

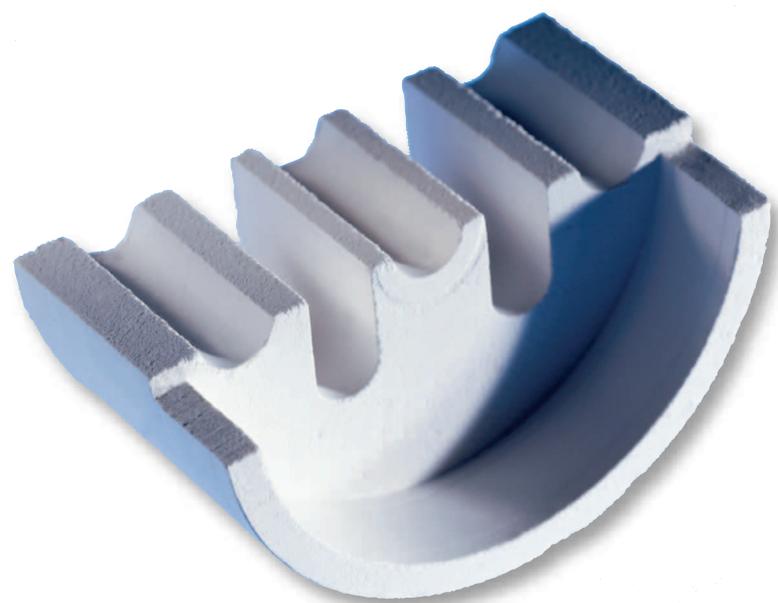
Benefits

- Dimensionally stable over time up to the maximum using 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

WDS Shape is specifically designed for superior and complex machining allowing to produce high quality machined components and to provide highly effective insulation.

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



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	Test Method	WDS Shape
Classification Temperature, °C (°F)		950 (1742)
Denisty, kg/m³ (pcf), nominal		350 (17.1)
Cold Compressive strength, MPa (psi)	ASTM C 165	0.34 (49.3)
Linear Shrinkage, %		
	Full soak, 900°C (1652°F), 24 hours	<2.0
	One side exposed soak, 1000°C (1832°F), 12 hours	<0.5
Thermal Conductivity, W/m•K (BTU•in/hr•ft²•°F), per ASTM C177		
	200°C (392°F)	0.025 (0.173)
	400°C (752°F)	0.031 (0.215)
	600°C (1112°F)	0.037 (0.256)
	800°C (1472°F)	0.042 (0.291)
Chemical Analysis, % weight basis after firing		
	Silica, SiO ₂	45-60
	Zirconium Silicate, ZrSiO ₄	35-44
	Others	3-10

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 condnsation is avoided

Size and Availability

Board Size, 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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