WDS® Nextra™ Board

Product Description

WDS Nextra Board is a rigid and compact microporous insulation with an engineered mineral matrix designed for applications where the lowest thermal conductivity up to 1000°C (1832°F) is the main selection criteria.

Like any other microporous insulation of our industrial range produced with our exclusive WDS Technology process, WDS Nextra Board features extremely good handling and machining properties; the extremely 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.

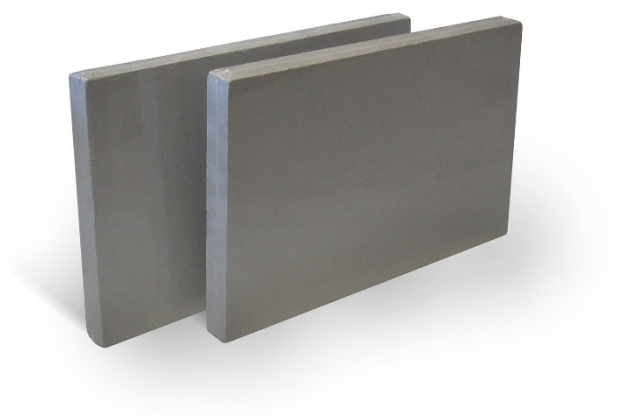
Environmental and Health Safety

WDS Nextra Board 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 Nextra Board 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 destroy the pore structure. Non condensed moisture does not affect the product.

Sensitivity to liquids of WDS Nextra Board can be eliminated by using a surface treatment such as temperature resistant aluminum foil or shrink-wrapped PE Film.



Features

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

Benefits

- Dimensionally stable over time up to the maximum using temperature
- Helps to control energy efficiency and heat flow very precisely
- Easy to cut and with proven installation techniques
- Freedom in engineering at the design stage
- Increases effective volume inner capacity or reduces encumbrance in equipment and apparels of any kind.
- Largest product dimensions available
- Environmentally friendly

Applications

WDS Nextra Board has been designed to meet superior compressive strength as highly effective back-up insulation even under high temperature exposure and features the lowest shrinkage amongst those products from our range classified 1000°C (1832°F).

Process	Applications
Agglomeration and Sintering	Metals production
Calcining	Lime calcining
Curing and Forming	Coating, polymer production, enameling
Firing	Heating of clay, frits
Drying	Organic compoun and water removal, recycling
Forming	Extrusion, molding
Fluid heating	Chemical production, reforming, distillation,cracking, hydro-heating
Heating and Melting	Casting, metals making, glass making, recycling
Heat Treating	Hardening, annealing, tempering
Incineration	Waste handeling and disposal, recycling
Metal Reheat, Tempering	Forging, rolling, extruding, annealing, galvanizing, coating, joining, tempering
Separating	Air separation, refining, chemical cracking
Smelting, Melting	Metals making, glass making
Heating	Hot air and water production
Energy Collection	Solar energy collection
Energy Production	Production of electricity and distribution
Energy Storage	Transport, energy distribution

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Physical, Thermal and Chemical Properties

	Test Method	WDS Nextra Board
Classification Temperature, °C (°F)		1000 (1832)
Density, kg/m^3 (pcf), nominal		275 (17.1)
Cold Compressive Strength, MPa (psi)	ASTM C 165	0.30 (43.5)
Linear Shrinkage, %, ASTM C365		
Full soak, 1000°C (1832°F), 24 hours	ASTM C365	<3.0
One side exposed soak, 1000°C (1832°F), 12 hours		<0.5
Thermal Conductivity, W/m•K (BTU•in/hr•ft^2•°F)		
200°C (392°F)	ASTM C 177	0.022 (0.152)
400°C (752°F)		0.023 (0.159)
600°C (1112°F)		0.027 (0.187)
800°C (1472°F)		0.033 (0.228)
Chemical Analysis, % weight basis after firing		
Silica, SiO_2		55 - 75
Silicon Carbide, SiC		25 - 40
Others		3 - 10
Loss of Ignition, Dry condition		<2.5

Shelf life

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

Standard Dimensions and Availability

Board Size, mm (in)	Thickness, mm (in)
1000 x 650 (39.3 x 24.41)	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)
1320 x 1000 (47.24 x 39.27)	