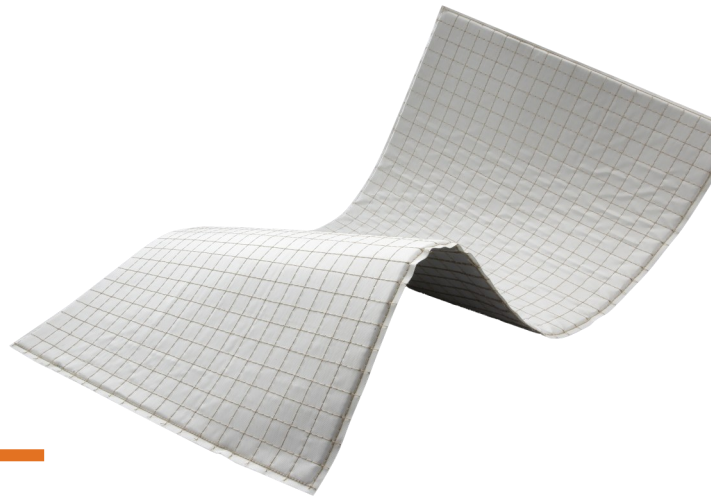


WDS[®] MultiFlex[®] Plus and Plus HY

Product Data Sheet



Product Description

WDS MultiFlex Plus is a flexible quilted microporous product available in both a hydrophilic and hydrophobic formulation which is specifically designed for applications requiring flexibility and twisting properties. WDS MultiFlex Plus has excellent handling and cutting properties and has best in class insulating properties together with low shrinkage up to 1000°C (1832°F).

All WDS microporous insulation solutions offer exceedingly low thermal conductivity at high temperatures by limiting convection, conduction and radiation through advanced techniques. This results in an insulating solution that is several times better than typical high temperature lightweight insulation materials.

WDS microporous insulation solutions are the ideal choice for increased energy savings, space optimization and/or reduction of weight.

Features

- Next generation and best-in-class, SiC opacified microporous product, for the lowest thermal conductivity it provides within its usable temperature range
- Flexible in either two or three dimensions (2D or 3D stitching)
- Fully enclosed within high temperature glass fiber cloth
- Easy to cut and available with a patching kit
- Inorganic
- Unaffected by thermal shock
- Good resistance to compression associated to its low density
- Homogeneity throughout the entire surface and thickness
- Large format sizes available
- Does not contain hazardous components such as Rutile (TiO₂)

Benefits

- > The use of the most thermally efficient WDS quilted product allows for the ultimate design flexibility whether you need to save energy or create space
- > Exceptionally easy to handle and bend around piping, ducting and complex shapes
- > Limits dust release and further improves handling
- > Easy to cut and modify on site
- > Addresses Corrosion Under Insulation (CUI) concerns
- > Dimensionally stable up to the maximum use temperature
- > Can withstand compressive loads in operation such as foot traffic on pipe cladding
- > Reliable and consistent performance throughout
- > Large size allowing for a faster installation time and less joints
- > Environmentally friendly and safe

Applications

- Process and transfer pipes and pipelines
- Turbines
- Exhausts
- Fuel Cells
- Any equipment and apparatus with curved or irregular surfaces

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Properties	WDS MultiFlex Plus	WDS MultiFlex Plus HY
Product form	Quilted	Quilted
Grade	Hydrophilic	Hydrophobic
Classification Temperature, °C (°F)	1000 (1832)	1000 (1832)
Density, kg/m ³ (pcf), DIN 66133	275 (17.2)	275 (17.2)
Compressive Strength (10% deformation), MPa (psi), ASTM C165		
Core only / board data	0.33 (47.9)	0.33 (47.9)
Linear Shrinkage, %, ASTM C356		
1000°C (1832°F), 24 hour full soak	3.0	3.0
1000°C (1832°F), 12 hour, single side soak	0.6	0.6
Chemical Analysis, %		
Silica, SiO ₂	55-75	
Silicon Carbide, SiC	25-40	
Others	3-10	
Thermal Conductivity, W/m·K (BTU·in/hr·ft²·°F), ASTM C 177		
200°C (392°F)	0.024 (0.167)	
400°C (752°F)	0.026 (0.180)	
600°C (1112°F)	0.031 (0.215)	
800°C (1472°F)	0.038 (0.237)	

Shelf Life

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

Standard Dimensions and Availability

Dimensions, mm (in)	Thickness, mm (in)	Quilting Options, on demand
1000 x 500 (39 x 19.5)	5, 6, 8, 10, 12 (0.20, 0.25, 0.31, 0.39, 0.50)	2D: Semi-quilted (L or W)
915 x 610 (36 x 24)		3D: Full-quilted (L or W)
1000 x 1000 (39 x 39)		Stitching path options:
1200 x 1000 (47.24 x 39)		25 x 25mm (1 x 1in) 50 x 50mm (2 x 2in)

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Environmental and Health Safety

WDS MultiFlex Plus quilted products do not contain any hazardous substance as defined by EU Directive 2006/1907/EEC and IARC. The fibers or filaments used as reinforcement of the mineral core are also exonerated from any classification falling under EU Directive 97/69/EC.

Resistance to Moisture and Water

WDS MultiFlex Plus can also be supplied in a hydrophobic version which is water repellent in its entire thickness; the water repellent treatment withstands up to 250°C (482°F) continuously.

Alternatively, the product can be supplied with an aluminum encapsulation which prevents water absorption up to 500°C (932°F). Non condensed moisture does not affect the product, even in its hydrophilic version.

The product(s) represented are intended for industrial refractory applications. The values and application information in this datasheet 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.