

# WDS<sup>®</sup> Pad

## Characteristics

WDS<sup>®</sup> Pad is a microporous insulation material with an extremely low coefficient of thermal conductivity, i.e. with very good insulating properties.

WDS<sup>®</sup> Pad consists of inorganic oxides. The main constituent is fumed silica, the other components are opacifiers for minimizing infrared radiation, and silicates.

WDS<sup>®</sup> Pad is not flammable and meets the requirements acc. to DIN ISO 4102 for fire protection class A1.

It can be used up to a maximum application temperature of 1000 °C.

## Application

Tried and tested applications for WDS<sup>®</sup> Pad include insulation for electric grills especially in glass ceramic grills.

**In these applications, WDS<sup>®</sup> Pad fulfills several functions, such as:**

- Precisely controlled energy emission
- No elimination of volatile compounds (except for absorbed water)
- Low space requirement, and therefore low installation height.
- Mechanically suitable anchoring of the heater to the surface of the hardened WDS<sup>®</sup> Pad.
- Material properties highly suitable for machining
- Environmentally and physiologically harmless material

**WDS<sup>®</sup> Pad is also successfully used as insulation material in the following areas:**

- Electronic parts
- Measurement equipment

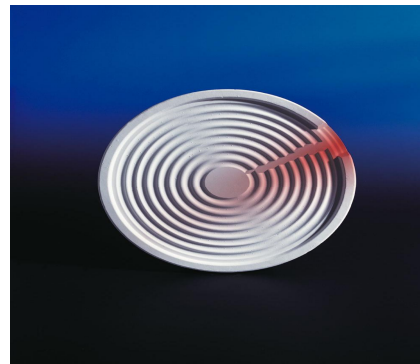
## Form of delivery

Molded tailor made parts

Standard dimensions:

Max. diameter 250mm, max. thickness at this time 18mm.

Other dimensions are available on specific request.



## Restrictions on Applications

WDS<sup>®</sup> Pad is sensitive to all liquids that can wet it, such as water, oil, petroleum spirit, since they can destroy the pore structure.

## Shelf life

WDS<sup>®</sup> Pad, if properly stored, has an unlimited shelf life.

WDS<sup>®</sup> Pad must be handled and stored in dry conditions.

WDS<sup>®</sup> Pad is resistant to diffusion by atmospheric humidity (water vapor).

## Composition

Mixture consisting SiO<sub>2</sub>, Zirconium Silicate, Glassfiber and small quantities of

## Electrical resistance

Panel unhardened

Stored under dry conditions

> 2000 MΩ

## Thermal shock resistance

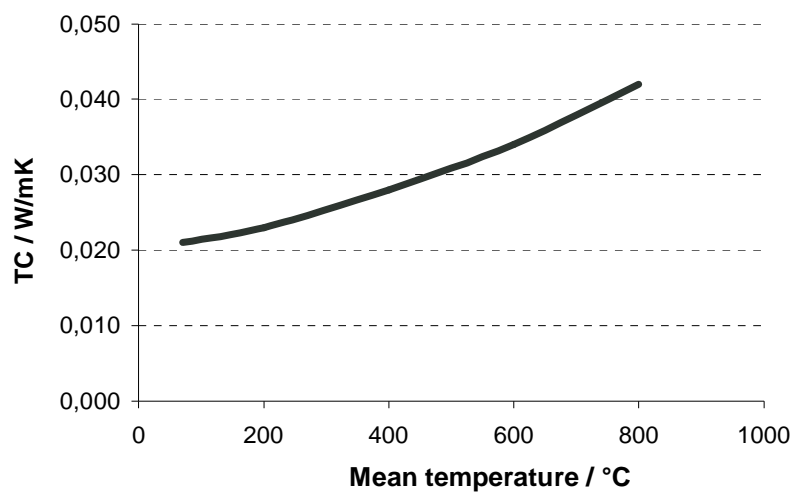
WDS<sup>®</sup> Pad is insensitive to high and low temperature thermal shocks.

## Product data

Properties	Comments	Standards	Units	Values	
Color				White	
Bulk density			kg / m <sup>3</sup>	300-350	
Heat resistance			°C	1000	
Shrinkage	1000 °C / 12 h, temperature applied at one side		%	0.5	
Linear shrinkage / long term	Temperature at all sides				
	950 °C		%	1.3	
	1000 °C		%	2.4	
Specific heat capacity	RT up to 800 °C		KJ / kgK	0.8	
Thermal conductivity		DIN 51046	W / mK		
				20 °C	0.021
				200 °C	0.023
				400 °C	0.028
				600 °C	0.034
	800 °C	0.042			

\*The above data are only intended as a guide and should not be used in preparing specifications

### Thermal conductivity as a function of mean temperature ( DIN 52612 )



## Safety directions

WDS<sup>®</sup> Pad is not a hazardous material as defined by in EU directive 91/155/EEC.  
The fibers used for mechanical reinforcement of WDS<sup>®</sup> Pad are not respirable as defined by WHO.  
Please also observe our material safety data sheet.  
WDS<sup>®</sup> Pad does not liberate hazardous decomposition products and, as far as is known at present, does not cause any problems to human health.

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.



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Please address all technical questions that affect quality and product safety to:

Porextherm GmbH  
Heisinger Strasse 8  
D-87437 Kempten

[www.porextherm.com](http://www.porextherm.com)

[info@porextherm.com](mailto:info@porextherm.com)



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