WDS® Granulate

Product Data Sheet

Product Description

WDS Granulate is an inorganic loose-fill pourable granular microporous insulation with very good insulation properties and excellent resistance to heat.

Thanks to an optimized mix of fine and coarse grain particles which possess a microporous structure, WDS Granulate feature very low thermal conductivity whilst maintaining a very low density, even after compaction.

WDS Granulate can be easily poured and homogeneously distributed through vibration from the outer casing of any closed system in which WDS Granulate is contained, and it is therefore the ideal solution for filling space and voids of complex geometries having limited space structures and where shaped and rigid insulation cannot be applied or would require less cost-effective complex machined components to be considered.

Features

- Best-in-class for lowest density
- Controlled and optimal granulometry
- Not affected by thermal shock
- Negligible shrinkage
- Highly efficient insulation in limited space and containment systems of any kind with complex geometry.
- Inorganic and non-combustible
- Unaffected by most chemicals

Benefits

- Extremely favorable kg cost / volume ratio
- Simple and efficient installation
- Allows to design safer and lighter structures.
- Helps to control energy efficiency and heat flow very precisely
- Cost efficient insulation for complex geometries

Applications

WDS Granulate include any application requiring a pourable insulation where access and space is limited and in particular:

- Industrial chimney walls
- Fuel Cells
- Filler for kiln cars in ceramic tunnel and light-weight back up insulation of suspended roofs
- Insulation core of high temperature boxes
- RES Boxes

Environmental and Health Safety

WDS Granulate 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 define by the WHO (World Health Organization).

Resistance to Moisture and Water

WDS Granulate has a non-porous surface therefore it is sensitive to liquids since they can densify the pore structure influencing thermal conductivity; this includes substances such as water, oil and petroleum spirit. Non-condensed moisture does not affect the product

www.morganthermalceramics.com
Email: marketing.tc@morganplc.com
Thermal Ceramics is a business of Morgan Advanced Materials

WDS® Granulate

Product Data Sheet

Properties	WDS Granulate
Classification Temperature, °C (°F)	1000 (1832)
Density, kg/m^3 (pcf), nominal	125 (7.8)
Chemical Analysis, % weight basis after firing	
Silica, SiO_2	60 - 80
Silicon Carbide, SiC	20 - 40
Others	0 - 3
Thermal Conductivity, W/m•K (BTU•in/hr•ft^2•°F), ASTM C 177	
200°C (392°F)	0.027 (0.19)
400°C (752°F)	0.035 (0.24)
600°C (1112°F)	0.049 (0.34)
800°C (1472°F)	0.068 (0.47)

Shelf Life

- WDS Granulate is generally filled under suction or vibration. Larger spaces that are not amendable to the above methods may be filled with the aid of external vibration equipment. All filling methods lead to densification and compaction of the granule particles, however, to rule out setting during use, the granules are mechanically compressed by up to 10%
- Unlike other insulation materials such as fibers, settling cannot occur
- The individual granules occupy a greater volume, i.e. they expand, when crashed
- WDS Granulate has unlimited shelf life if properly stored
- WDS Granulate is not affected by diffusion by atmospheric humidity (water vapor) proving water condensation is avoided

Standard Dimensions and Availability

Carton, kg (lbs)	Bags, kg (lbs)
10, 30 (22, 66)	65 (143)

www.morganthermalceramics.com
Email: marketing.tc@morganplc.com
Thermal Ceramics is a business of Morgan Advanced Materials