



Nano Shield FP1

Product Description

Nano Shield is an aqueous dispersion formed by different types of solid insulating particles, vehicle, additives and water, where the dimensions of its ingredients are between 30nm and 12mm.

When applied on an appropriate substrate, it becomes a solid film, given the evaporation of the volatile component through chemical reaction.

Benefits

- Nontoxic and non-flammable making it safe around humans and in enclosed areas.
- Water as a solvent.
- Ambient curing material.
- Adhesion to most surfaces with minor surface preparation.
- Sprayable application and ease of maintainability.
- Will function with direct (impinging flame) or indirect heat.
- Adapts to complex geometries due to high viscosity and adhesion properties.
- Improved thermal properties at higher temperatures. Emissivity will account for more heat transfer at temperatures above infra-red spectrum.
- Non-sacrificial operating temperatures up to 1800°C with minimal added weight
- Between 200 to 1200°C, it outperforms competing products with its ease of application and superior, long-term technical performance.

Specifications

Color	Light beige
Appearance	High thickness emulsion
Aspect	White or slightly beige
Odor	There is no predominant odor.
PH	Not applicable
Fusion point	Not applicable

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Freezing point	0°C
Initial boiling point	100°C
Evaporation Rate	<1
Flash point	Not applicable
Flammability	Nonflammable
Lower / Upper Flammability and Explosive Limits	Not applicable
Vapor pressure	Between 45 e 90 kPa (Between 338 & 675 mm Hg) at 50°C
Vapor density	(Air = 1) 3 to 4
Relative density	between 900 and 1250 kg/m3 (between 1.00 and 1.25 g/cm3 density) at 15°C
Non-volatile solids	63%
Solubility in water	Soluble in water
Auto-ignition temperature	Not applicable
Decomposition Temperature	>1450°C
Viscosity	Kinematics: <7 mm ² /s (<7 cSt) at 40°C

Applications

It can be used as fireproofing and thermal insulation. Nano Shield can be used in projects and / or equipment that operate between the temperature range of 200 to 1,800°C continuously. However, a key benefit of this family is its use at temperatures above 1,000°C, where currently there are no commercial products that satisfy the conditions of long-term performance, application and durability.

All products in the Nano Shield family are resistant to direct flame and radiated heat sources at temperatures above 1,400°C. Within this family there are products that can be heated and cooled immediately using water without cracking.

Packing and Handling

Delivery Form

Beige aqueous dispersion

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Packaging

Generally, the product is packed in plastic bucket containers with 12Kg of product but can be packed in different at client's request.

People

Nontoxic and non-flammable making safe around humans in closed enclosures

Planet

High material efficiency and minimized waste in production through recycling of raw materials

Performance

Joint developments with customers on formulations.

Consistent high-quality production.

Safety

For regulatory such as the classification and labeling as dangerous substances of goods please refer to our corresponding Material Safety Data Sheet.

Contact Us

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