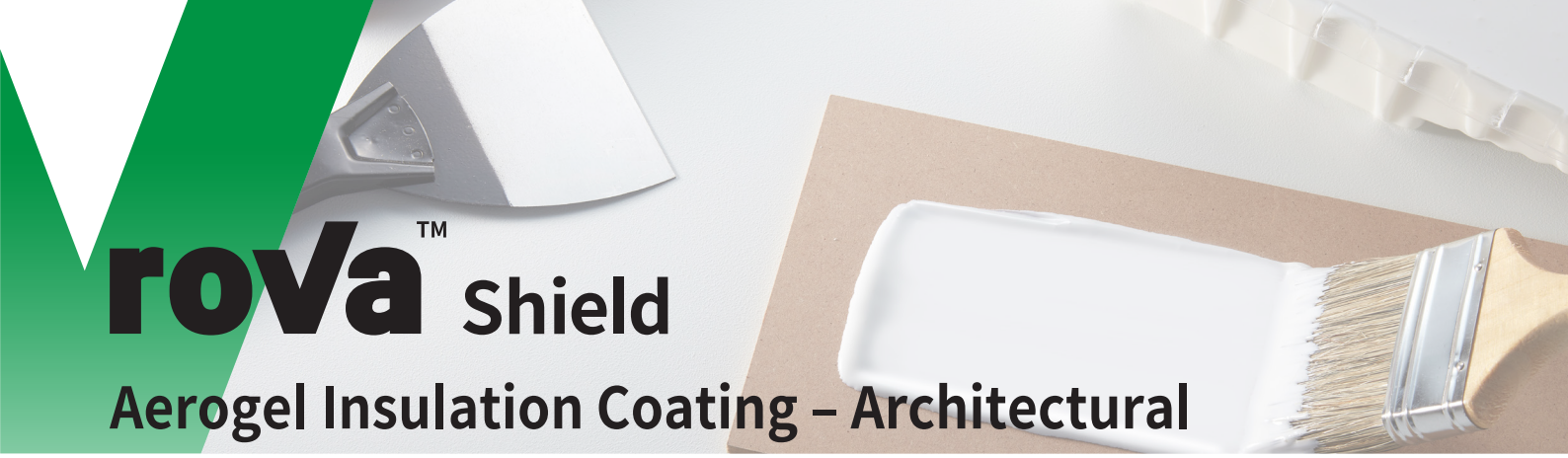


roVa™ Shield

Aerogel Insulation Coating – Architectural

roVa™ Shield is an environmentally friendly water-based insulation coating using silica aerogel powder as the main performance ingredient. It exhibits excellent thermal insulation and hydrophobic properties and is perfect for insulating architectural buildings and preventing condensation, as well as dampening ambient sound and noise.

Technical Features

Coating type	Acrylic
Color	White
Size	18L
Density	0.6 ~ 0.7g/cm^3
Viscosity	4,000 ~ 6,000cPs
Application method	brush, roller, airless spray
Theoretical coverage	1.0 ~ 1.1m^2/L (500μm thickness)
Solids by volume	50~55%
Dry to touch time	10 minutes
Cure time	30 minutes
Storage	6 months
Thermal conductivity	0.055 ~ 0.060W/m·k
Storage Temp.	10 ~ 40°C
Operating temp.	-50 ~ 120°C
Durability	5 years

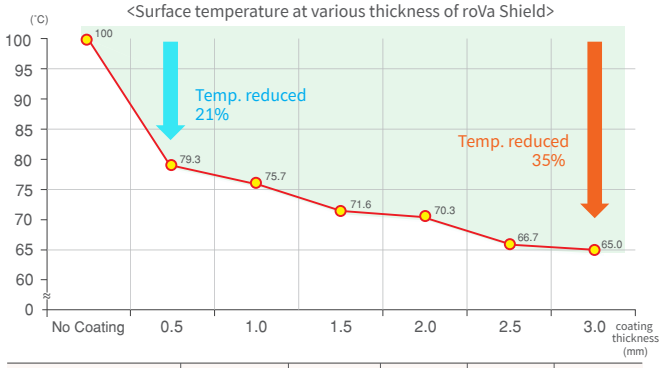
Usage and Application

- Apply with ease using ordinary paint equipment
- Improve building energy efficiency by applying to inner wall
- Insulate outer walls by using with roVa Shield Topcoat
- Prevent condensation and mold generation
- Dampen ambient sound and noise

Performance

- Excellent thermal insulation properties over wide temperature range (-50 ~ 120°C), utilizing the low thermal conductivity of aerogel (0.017 ~ 0.022mW/mk)
- Significant temperature drop observed when roVa Shield is shielding heat from a hot surface. Surface temperature drops 21% ~ 35% at various coating thickness when hot plate is set to 100°C

<Surface temperature at various thickness of roVa Shield>



Coating Thickness(mm)	No Coating	0.5	1.0	2.0	3.0
Surface Temperature(°C)	100°C	79.3°C	75.7°C	70.3°C	65.0°C
Temperature Reduced (%)	0	20.7%	24.3%	29.7%	35%

Coating Thickness(mm)	No Coating	0.5	1.0	2.5	3.0
Surface Temperature(°C)	50°C	43.3°C	42.8°C	40.1°C	37.3°C
Temperature Reduced (%)	0	13.4%	14.4%	19.8%	25.4%

* Tested by: roVa Corporation, 2019

Environmentally Friendly

- Does NOT contain dangerous chemicals, VOC, or bad odor
- Minimize carbon emission by promoting energy efficient buildings

roVa

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roVa™ Shield

Aerogel Insulation Coating User Manual

Product Preparation

- **Do not add water or other additives.**
- Store at room tempearture(10 ~ 30°C), and avoid direct contact of sunlight or fire.
- Keep the product sealed before and after use.
- Mix the product for 3~5 minutes to evenly disperse ingredients.
- Avoid direct contact to your eye or skin. If contacted, seek for medical advice if you're concerned.
- Read GHS-MSDS for your own safety.

Product Application

- Avoid applying in a humid(humidity over 85%) or cold(10°C or lower) environment, for the coating might not show it's best performance.
- Ventilate the area when applying and drying the product.
- Wear safety equipment at all times.
- Keep the application surface clean.
- If the surface material is cement or concrete, it is best to slightly wet the surface before applying the coating. If the surface material is stainless steel or plastic, it's best to apply primer before applying the product.
- Avoid direct contact of water before the coated surface is fully dried.

Post Product Application

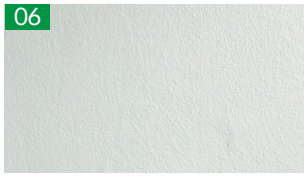
- Clean equipment with water after the product application.
- Store used product at room temperature.
- Contact your local authority for information on waste disposal.

Application Method

01 Prepare the product, application equipment & safety equipment.
02 Organize the environment. Clean the applying surface.

03 Apply primer if necessary.
04 Mix the product for 3~5 minutes before the application.

05 Use brush, roller or air-less sprayer to apply the coating.
06 Requires 1~2 hour drying time for re-application.



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