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Solutions

IT ALL STARTS FROM THE **ROOF**



DOES THIS
LOOK
FAMILIAR?



2X THERMAL GUARD

Complete Protection
For Your Home



THERMAL

EXPANSION & CONTRACTION

Concrete will expand or contract due to fluctuations in temperature. The expansion and contraction with changes in temperature occur regardless of the structure's cross-sectional area. The size of the concrete structure whether it is a bridge, a highway, or a building does not make it immune to the effects of temperature.

Concrete expands slightly as temperature rises and contracts as temperature falls. Temperature changes may be caused by environmental conditions. Expansion amounts to a length change of 1.7* centimetres for every 30.5 meters of concrete subjected to a rise above 38 degrees Celsius.

Severe problems develop in structures where heat cannot be dissipated. Thermal contraction on the concrete's surface without a corresponding change in its interior temperature will cause a thermal differential and potentially lead to cracking. Temperature changes that result in contraction will crack concrete members that are held in place or restrained by another part of the structure.

Research now suggests that there is sufficient evidence to link indoor exposure to mould and dampness on walls due to water seepage leading to upper respiratory tract symptoms, cough, wheeze, in healthy people. It can worsen asthma symptoms in people with asthma. There is also a possibility that mould exposure can result in respiratory illnesses or shortness of breath in otherwise healthy children.

Terrace is the most exposed part of the house, and it has to endure the dust, dirt, rain, sunrays, moisture, humidity, and heavy winds which results may discolouration, dampness, and structural damage. Hence, step to provide protection to your terrace is imperative. This will safeguard the internal seepage from cracks on the roof surface.

SOLUTION FOR SAFE, DURABLE AND HEALTHY LIVING SPACES



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ALL WEATHER COAT FOR YOUR ROOF

Introducing **2X THERMAL GUARD**; the all in one solution for waterproofing and thermal insulation for you roof concrete or metal surfaces.

2X THERMAL GUARD is an environmentally friendly, water-based, Thermal Insulation coating - formulated using Silica Aerogel as the key performance ingredient. **2X THERMAL GUARD** revolutionary properties have twin benefits of providing excellent water proofing along with Thermal insulation.

The product has been developed for the first time in India using Aerogel as its primary ingredient along with polymer modified acrylic binder with special additives.

Aerogel based **2X Thermal Guard** is a breathable super-hydrophobic material creates a surface that resists dust and dirt absorption causing water to bead up and roll off, removing surface debris.

The solution also significantly reduces radiating heat thereby improving the energy efficiency of residential spaces and industrial facilities by reducing power consumption of air cooling systems by at least 20%.

2X

*" Volatile organic compounds (VOC) means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions

2X Thermal Guard is water based, eco-friendly comes with zero maintenance and operational cost for 5 years. The product is CE Certified. Does not contain hazardous chemicals, VOCs* (Volatile organic compounds) (below 1 g/L), or bad odours.

Aerogel based 2X Thermal Guard is a breathable super-hydrophobic material creates a surface that resists dust and dirt absorption causing water to bead up and roll off, removing surface debris keeping the surface clean and dry.

Save on energy bills by 20% through its excellent insulation properties, utilizing the low thermal conductivity of Silica Aerogel.

AN INVESTMENT THAT PAYS FOR ITSELF



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SURFACE CLEANING COMPOUND FOR HORIZONTAL SUBSTRATES

2X THERMAL GUARD- Surface Cleaner is a proprietary formula for surface cleaning that goes deep into the surface, protecting it against re-growth of regular mould, algae, lichen or moss from patios, paths and prepares the surface for application of base coat.

- Ensures the surface is free from any contamination.
- Allows base coat to firmly stay on the surface for a longer period of time.

Recommended for horizontal surfaces such as concrete roof/terrace, Brickbat, metal, asbestos, wood and roof tile surfaces.

- Ease of application-Ready to use, brushable or spray applied.
- Appearance – Provides a clean surface for the application of 2XTG –Base coat.
- Economical - Cost effective.
- Penetration - Due to low viscosity penetration is high, which provides deep cleaning removing algae, lichen or moss from the substrate.



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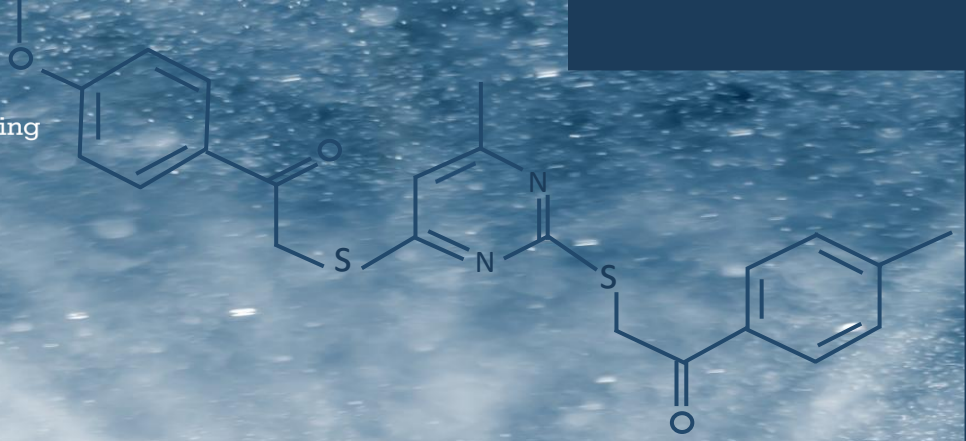
2X THERMAL GUARD BASECOAT is a premium water-based acrylic primer that serves as foundation for **2X THERMAL GUARD INSULATION COAT**. It seals off the substrate to resist alkaline and moisture attack to minimize efflorescence and discolouration. Creates a foundation layer that improves adhesion of paint or coating performance to reduce the possibility of cracking and peeling.

Resist water ensuring less stain marks. Free from harmful chemicals such as *APEO, formaldehyde, heavy metals and has low volatile organic compound (VOC).

Recommended on concrete, masonry, plaster & brick work surfaces.

WATER-BASED ACRYLIC PRIMER FOR HORIZONTAL & VERTICAL SUBSTRATES





AEROGEL BASED THERMAL INSULATION COAT FOR ROOFS

Aerogel's excellent thermal insulating properties are due to their ability to almost nullify two of the three methods of heat transfer – conduction and convection – the sponge-like microstructure of the Aerogel inhibits air circulating through the Aerogel lattice. They are good conductive insulators because they are composed almost entirely of air, which is a very poor heat conductor.

2X THERMAL GUARD uses Silica-based Aerogel powders that are especially good insulators because silica exemplifies air's poor heat conduction

Aerogel provides excellent UV protection. It exhibits superior adhesion to many substrates. Ultraviolet and Infrared Reflective – Aerogel particles high surface area and complex surface structure disperse light waves, preventing ultraviolet light from passing through the material, and reflects infrared rays which reduces heat absorption into the coated surfaces.



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CLEARSHIELD is specially formulated water based non-toxic & non-flammable product. The solution has extreme water resistant and water repellent properties. Formulated using polymer based binder, enhanced with cross-linking polymer additives.

CLEARSHIELD forms a tough, long-lasting abrasion resistant coating compatible on stone, unpolished granite, concrete and on acrylic emulsion painted wall surfaces. **CLEARSHIELD** forms a non-permissible coating on the said surfaces. It is a ready to use UV Resistant and abrasion resistant coating. It can be also used on internal walls for dampproofing treatments along with anti-microbial anti fungal properties.

LIQUID WATERPROOFING COMPOUND FOR INTERIOR & EXTERIOR



ABRIDGED TECHNICAL SPECIFICATION

2XTG- SURFACE CLEANER

SURFACE CLEANING COMPOUND FOR
HORIZONTAL SUBSTRATES

2XTG- BASE COAT

SURFACE CLEANING COMPOUND FOR
HORIZONTAL SUBSTRATES

Composition/information on ingredients

Product contains following ingredients

INGREDIENTS	Wg %
Sodium Ions	20
Detergents	2
Surfactants	6
Proprietary Alkaline Salts	72

INGREDIENTS	Wg %
De mineralized Water	69
Silica Aerogel	2
Modified Acrylic Binder	8
Proprietary Additives	15
Surfactants	1
Proprietary Cross link Polymers	5

Physical and chemical properties

Category	Feature
Form	Powder
Solubility in Water	Completely Soluble
PH After Water Dilution	10
Specific Gravity	1.01 g/cc
Appearance/Odor	Clear Liquid/ Negligible
Flash Point	None

PROPERTIES	RESULT
Coating Type	Paste (liquid upon stirring)
Color / Odour	White / Negligible
Size	1 Ltr, 5Ltr, 10Ltr
Relative Density	0.8 ~ 0.9
Viscosity	12,000 ~ 16,000 cPs
VOCs	0.3 g/L
Application Method	Brush, Roller, Airless Sprayer
Dry to touch time	2 ~ 3 hours (25°C, 77°F, Brush)
Cure time	24 hours (25°C, 77°F, Brush, 1mm, 0.04" thickness)

Method of application

PRODUCT PREPARATION & APPLICATION

- Add 5 Litres of water to 100 gms of 2X THERMAL GUARD –Surface Cleaner and stir it till it completely dissolves.
- Ensure the surface completely clean from any debris.
- Rinse the surface with water and allow it to soak in for 15~30 minutes and appears dry.
- Apply 2X THERMAL GUARD –Surface Cleaner with a brush liberally on the surface and allow it to dry for 45 minutes.
- Again rinse the surface with water and brush the surface with a hard brush to clean all the dirt, algae and impurities.
- Wash the surface with water and allow it completely dry before the next process.
- In case of visible cracks, fill them with PU Sealant, post cleaning the surface.
- DO NOT ADD WATER OR OTHER ADDITIVES.
- Store at room temperature (10 ~ 30°C), and avoid direct contact with sunlight or fire.
- Keep the product sealed before and after use.
- Mix the product for 3~5 minutes to disperse ingredients evenly.
- Avoid applying in a humid (humidity over 85%) or cold (10°C or lower) environment. Else, the coating may not show it's best performance.
- Wear safety equipment at all times.
- Keep the application surface clean. Recommended use of 2X Thermal Guard – Surface cleaner.
- If the surface material is cement or concrete, it's best to apply 2X Thermal Guard –Base Coat before applying the product.

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ABRIDGED TECHNICAL SPECIFICATION

2XTG- INSULATION COAT

AEROGEL BASED THERMAL INSULATION
COAT FOR ROOFS

CLEARSHILED

LIQUID WATERPROOFING COMPOUND FOR
INTERIOR & EXTERIOR

Composition/information on ingredients
Product contains following ingredients

INGREDIENTS	Wg %
De mineralized Water	69
Silica Aerogel	2
Modified Acrylic Binder	8
Proprietary Additives	15
Surfactants	1
Proprietary Cross link Polymers	5

INGREDIENTS	Wg %
De mineralized Water	69
Anti Oxidants	2
Hydrophobic Additives	8
Modified Polyurethane	15
Surfactants	1
Proprietary Cross link Polymers	5

Physical and chemical properties

PROPERTIES	RESULT
Coating Type	Water-based Acrylic
Colour / Odour	White / Negligible
Size	1 Kg, 5Kg, 15Kg
Relative Density	0.8 ~ 0.9
Viscosity	12,000 ~ 16,000 cPs
VOCs	0.3 g/L
Theoretical coverage	50 sq.ft./Kg (0.04" thickness) 2 Coats
Solids by Volume	0.6
Dry to touch time	2 ~ 3 hours (25°C, 77°F, Brush)

PROPERTIES	RESULTS
Form	Liquid
Solubility in Water	Completely Soluble
PH	NA
Specific Gravity	1.02 g/cc
Appearance/Odor	Milky White / Negligible
After Application	Transparent
Coverage/litre	Approx. 10 Sq M
Shelf Life	12 Months in original sealed condition
Flash Point	None

Method of application

PRODUCT PREPARATION & APPLICATION

- DO NOT ADD WATER OR OTHER ADDITIVES.
- Store at room temperature (10 ~ 30°C), and avoid direct contact with sunlight or fire.
- Keep the product sealed before and after use.
- Mix the product for 3~5 minutes to disperse ingredients evenly.
- Avoid applying in a humid (humidity over 85%) or cold (10°C or lower) environment. Else, the coating may not show it's best performance.
- Wear safety equipment at all times.
- Keep the application surface clean. Recommended use of 2X Thermal Guard – Surface cleaner.
- If the surface material is cement or concrete, it's best to apply 2X Thermal Guard –Base Coat before applying the product.
- Avoid direct contact of water before the coated surface is fully dry.
- Hard, repeated strokes (using either brush or roller) may cause the Aerogel mix to come off, making the next coat application difficult.

- DO NOT ADD WATER OR OTHER ADDITIVES.
- Store at room temperature (10 ~ 30°C), and avoid direct contact with sunlight or fire.
- Keep the product sealed before and after use.
- Mix the product for 3~5 minutes to disperse ingredients evenly.
- Avoid applying in a humid (humidity over 85%) or cold (10°C or lower) environment. Else, the coating may not show it's best performance.
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Multiple benefits one solution



WATER
PROOFING



THERMAL
INSULATION



ECO
FRIENDLY



SELF
CLEANING

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