



# CHRYSO® THERMOSHIELD

## Solar Heat Reflecting Waterproof Elastomeric Coating

### Description

**CHRYSO THERMOSHIELD** is pure acrylic polymer based elastomeric high build solar heat reflecting eco- friendly paint for roof and exterior walls. The cooling effect is designed with high quality titanium di oxide pigment which reflects more than 80% of solar radiation and specialty micronized ceramic hollow sphere which reduces heat transmission inside the room. The cured **CHRYSO THERMOSHIELD** also acts as high performance waterproof membrane. When it is applied on exterior side walls and roof it reduces energy cost approximately 30%.

### Indicative Characteristics

Appearance of dry film	White, Grey. Other colour may be available on request
Specific Gravity	1.3±0.1
Drying time at 30°C, RH 65%	12 hours
Solid content, % (W/W)	>60
% Elongation at 14 days, ASTM D 412	150 ( minimum)
Solar Direct Reflectance, ASTM E 903	>0.75
Emissivity ASTM E 408	>0.9
Solar Reflectance Index( SRI), ASTM E 903	>90
Tensile strength at 14 days, MPa ASTM D 412	>2
Hardness Shore A, ASTM D 2240	>40
QUV Resistance, ASTM G 154, 1000 hours	No crack, No color change
Pull off Adhesion at 14 days, ASTM D 541, MPa	>1.5 (Concrete failure)
Coverage (Theoretical)	4-6m <sup>2</sup> /kg/coat
Fungi Resistance, ASTM G21	Passes test
Recommended film thickness ( DFT)	150-200 microns

### Domains of Application

**CHRYSO THERMOSHIELD** is used for heat insulation and waterproofing of old as well as new flat / slope concrete /metal roof, terrace and walls of residential, commercial and industrial buildings.

### Method of Application Surface Preparation

Prior to application of **CHRYSO THERMOSHIELD**, all surfaces must be prepared properly to avoid failure. The surface shall be cleaned to remove all dust, foreign materials/loose particles or any deposits of contaminants, which could affect the bond between the original substrate and the **CHRYSO THERMOSHIELD** system. This can be done by scarifying, grinding, water blasting, sand blasting, acid washing or any other approved method. Rectify depression / honey-comb (if any) in the surface, use **CHRYSO ARMOURCRETE** mortar ( 1part **CHRYSO ARMOURCRETE**, 2part cement, 4 part medium washed sand) and leave it for at least 24 hours before application of **CHRYSO THERMOSHIELD**.

### Treatment of Cracks

If there is any crack up to 2 mm, clean those cracks with vacuum cleaner, to open cracks, pour **CHRYSO PROOF ACRYLIC PRIMER** followed by a coat of **CHRYSO PROOF ACRYLIC** along the crack line and leave it to dry for overnight.

### Application of Primer

Though **CHRYSO THERMOSHIELD** adheres strongly with most of building materials like cement concrete, mortar, bricks, woods, metal etc, use of **CHRYSO PROOF ACRYLIC PRIMER** provide better performance of final coating system. Stir well the Primer and apply it with soft nylon brush or roller over the dry surface. Generally, one coat is sufficient. If the surface is too porous apply two coats of primer. Time gap between two coats should be 2-3 hours.

The information contained in this technical data sheet is given to the best of our knowledge and the results from extensive testing in order to remain as objective as possible. However, it cannot, in any case be considered as a warranty involving our liability in case of misuse or any different use of our products from the "Application" paragraph of this technical data sheet. Some application tests should be carried out before using the product to ensure that the methods of use and conditions of application of the product are satisfactory. Our technical assistance is at the disposal of the users. Consult the latest update of the technical data sheet on our website [www.chryso.com](http://www.chryso.com)

**CHRYSO India Private Limited | Registered & Corporate Office : Plot No. D -30/7, TTC Industrial Area, M.I.D.C. Turbhe, Navi Mumbai – 400705. Maharashtra, INDIA. Tel : +91 22 27685991/2**





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### Application of Thermoshield

After the application primer coat allow it to reach touch dry for 2-3 hours. Stir **CHRYSO THERMOSHIELD** to a homogeneous smooth consistency and apply it horizontally with soft nylon brush, roller or squeeze to thickness of 125-150 microns in single coat. Allow it to dry for approx. 4-5 hours. When the applied coat becomes sufficiently dry (no foot print observed) apply second coat vertically. Two coats are sufficient for general application (150-200 microns DFT) but for severe conditions, three or more coats are required to achieve desired results..

### Advantages

- Easy application; can be applied by brush, roller and squeegee at site.
- Elastomeric in nature; up to 1mm crack bridging capacity.
- UV Resistance- does not yellowing in sun rays exposure.
- Excellent resistance to carbon dioxide, acid rain, and alkali solution.
- Reduces cooling and heating demand
- Save energy and utility costs by maintaining temperature inside the room.
- Excellent resistance to dirt pick up.
- No VOC (Volatile Organic Compound).
- Can be tinted with good quality water based color fast pigment paste.
- Excellent adhesion with most of building material including concrete, metal and wood.

### Shelf Life & Storage

12 months from the date of manufacturing when stored in un-opened, original sealed and dry condition at a temperature range from +5°C to 40°C

### Packing

20 kg Plastic Bucket

### Precautions

- Reinforcement rods and other sharp materials should not be dragged over the **CHRYSO THERMOSHIELD** membrane, as this can puncture the same. **CHRYSO THERMOSHIELD** shall always be used WITHOUT dilution.
- Do not apply coating thickness more than 200 microns in one go. For higher coating thickness apply multiple coats.
- There should not be any rain during and after application of final coating for at least 6-8 hours.
- 24 Hours pond test shall be carried out after 72 hour of final coating application

### Safety

- Wear hand gloves, safety shoes and safety goggles while using and handling the product.
- In case eyes or mouth are affected wash with plenty of clean water and seek medical treatment immediately.

Before use, refer to the Material Safety Data Sheet. The MSDS is available on [www.chryso.com](http://www.chryso.com)

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