

THERMOSHIELD Insulation Mortar

COMPANY INFORMATION

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PRODUCT NAME

THERMOSHIELD 2 in 1 Insulation Mortar

PRODUCT DESCRIPTION

Thermoshield is a high quality heat insulating mortar designed for concrete surfaces. It reduces heat absorption and heat transfer by 140%, thus achieving and maintaining a cooler room temperature. It also buffers & reduces sound transmission whereas regular mortar allows sound to travel directly through walls & ceilings. Its low volume expansion characteristics make it non-combustible. When subjected to high temperatures, heat & flame cannot penetrate Thermoshield's surface as easily compared with ordinary plaster. Thermoshield weighs approximately 60% less than concrete, thereby reducing the cost of structural reinforcements. It is 7x more resistant to heat transmission than cement plaster resulting in savings on electricity consumption for air conditioning. Its unique water resistant formulation prevents water penetration and serves as an extra protective layer. On rooftops where water ponding can occur, an additional layer of cementitious waterproofing such as Aquashield Plus is required.

PROPERTIES

- Water resistant
- Low & high temperature resistant
- Reduced heat absorption
- Energy saving
- Sound reduction
- Fire retardant
- Light weight
- Economical
- Direct application on concrete
- Eco-friendly (no harmful chemicals additives)

CLASSIFICATION STANDARD

✓ ASTM C195 (USA) American Society for Testing and Materials

TECHNICAL DATA

Bulk density	0.370 kg/L	
Mortar density after addition of water	800 - 900 kg/m ³	
Compressive strength after 28 days	6.12 N/mm ²	
Weight of set mortar	400 - 450 kg/m ³	
Thermal conductivity (K)*	0.1028 W/m·°C	
Over-all heat transfer coefficient (U)*	0.36 W/°C	
Resistance value (R)*	2.78 °C/W	
Grade	0/2/mm	
Coverage (2.5cm application thickness)	2 m ² /23 kg bag	
Wall application thickness	2.5 cm	
Double wall application thickness	5 cm - 10 cm	
Roofdeck application thickness	2.5 cm - 5 cm	
Pot life	3 hours	
Curing time	Roofdeck	14 days (minimum)
	Wall	7 days (minimum)

*Values are based on 2.5 cm (1") thick air dried samples.

SURFACE PREPARATION

Concrete surface must be fully cured, structurally sound & stable, level, clean and free from paint and contaminants such as dirt, dust, loose material, oils, chemicals, etc. Dampen substrate well before Thermoshield application.

Substrate	Surface Preparation
New concrete	Concrete must have cured 14 - 28 days
Painted concrete	Abrade paint with steel brush & paint remover
Polished or waxed surface	Acid etch polished or waxed surface
Smooth surface	Apply scratch coat to roughen surface
CHB	Direct application, no scratch coat needed

APPLICATION GUIDE

1. Mixing

Use only non-absorptive containers such as plastic pail or a galvanized iron sheet as mixing base. Pour clean water into the mixing base & add 23 kg Thermoshield. Mix for 3 - 5 minutes using an electric mixer to attain a lump-free consistency. Allow mix to stand for 15 minutes. Mix briefly before use. Use within the 3-hour pot life.

Usage	Mixing Ratio	
	Water	Thermoshield
Wall plastering	12 L - 14 L	23 kg
Wall pouring	16 L	
Roof deck		

POT LIFE

3 hours

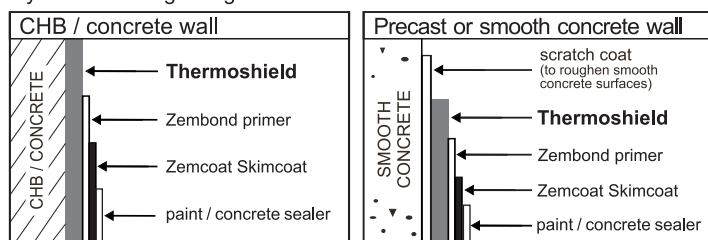


2. Application

Protect both the initial and final layers of Thermoshield from direct sunlight for at least 2 days. Damp curing with burlap is advised during summer season. Covering with polyethylene sheets is necessary during rainy season. Curing time: 7 - 28 days (depending on application area)

a. WALL PLASTERING

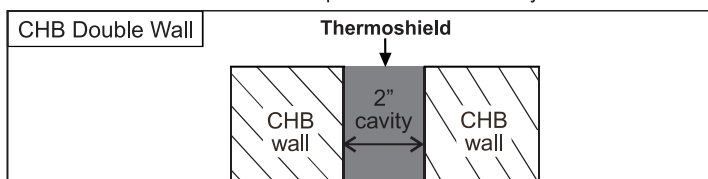
Thermoshield is directly applied on cured concrete walls using a steel trowel just like regular plastering. Surface preparation varies depending on surface condition. For precast or smooth concrete, apply a scratch coat before Thermoshield. For walls that need plaster in excess of 1 inch, apply Thermoshield in layers allowing 1-day interval. Level the additional 1-inch layer with a straight edge after its initial set.



b. DOUBLE WALL POURING

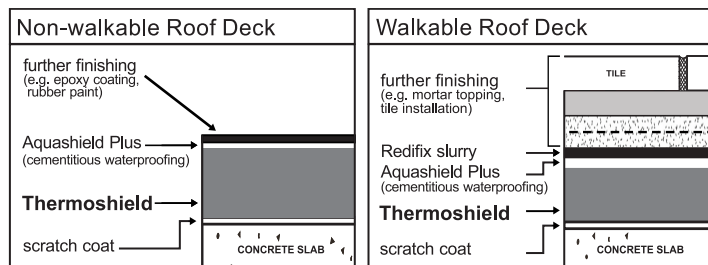
Thermoshield is poured carefully to completely fill up the cavity. This will create an insulated double wall.

⚡ **TIP:** Stomp Thermoshield mortar to help distribute it completely and to ensure that there will be no void spaces inside the cavity.



c. ROOF DECK TOPPING

Thermoshield is applied 1 - 2 inches on the concrete slab after applying scratch coat.



3. Finishing

Further finishing after Wall Plastering:

1. Thermoshield must cure for 7 - 28 days.
2. Apply Zembond Primer before Zemcoat Skimcoat.
3. Apply paint or concrete sealer.

Further finishing after Roof Deck Topping:

1. Thermoshield must cure for a minimum of 14 - 28 days.
2. Apply Aquashield Plus (cementitious waterproofing) before further finishing.
3. **For non-walkable roof deck:** Apply epoxy coating or rubber paint.
For walkable roof deck: Apply Redifix slurry before mortar topping or tile installation.

⚡ **TIP:** Laying a wire mesh inside the mortar topping will help avoid possible cracks.

PACKAGING

23 kg multilayer paperbag

CLEANING, SAFETY, STORAGE, SHELF LIFE & WARRANTY

Use clean water to remove excess material on tools before it hardens. Avoid eye exposure & prolonged skin contact. Do not inhale or ingest. In case of irritation, rinse with sufficient water. If symptoms persist, consult your doctor. When stored in a cool, dry place & in its original unopened packaging, Thermoshield Insulation Mortar will remain usable 9 months from date of manufacture. Due to variety of applications, different working methods and the various properties of bases, we cannot assume responsibility or liability with regard to the application of our products. Our guarantee and liability are restricted to the quality of our products at the time of acceptance of the customer of such products. In no case shall our liability extend beyond replacement of defective products, if any, found at the time of acceptance. For all deliveries and services, our General Sales Condition including warranties stipulated for each case are valid.

