

thermaplast®

Masonry Home Insulation System



INTRODUCTION

The THERMAPLAST Masonry Home Insulation System has been specifically designed to satisfy the New Zealand Building Code requirements for insulating and weatherproofing concrete or masonry construction. The insulation properties of the lightweight THERMAPLAST plaster means that only a 20mm thickness on the outside of standard lightweight concrete block walls will meet the Code requirements for insulation.

The THERMAPLAST system combines to give you a choice of exterior plastered finishes with the added advantage of a traditional interior plaster finish for uniformly finished inside walls, suitable for paint or wallpaper finishes.

THE THERMAPLAST SYSTEM

On the outside of exterior concrete block walls, THERMAPLAST is trowelled on in a two coat application to achieve a 20mm thick screeded finish. The THERMAPLAST base coat is then finished with any of Plaster Systems extensive range of precoloured or cement-based plaster finishes to provide a robust, durable plaster system. The inside concrete block surfaces are plastered with EZYPLAST, a white interior finishing plaster. EZYPLAST is trowelled on 5mm thick, screeded flat and polished to a smooth dense surface ready for painting or wallpapering.

BUILDING REGULATIONS

The THERMAPLAST system when applied to concrete block walls, in accordance with the manufacturers' instructions, the statements and conditions of this document, and properly maintained, will meet the relevant provisions of: New Zealand Building Code Clause B1 Structure, B2 Durability, C1 Outbreak of Fire, C3 Spread of Flame, E2 External Moisture, E3 Internal Moisture, F2 Hazardous Building Materials, and H1 Energy Efficiency.

PROPERTIES

Density	420kg/m ³
Thermal Conductivity	0.09 Wm°C
R Value	0.2 @ 20mm thick

PLASTER COMPONENTS

FINISHING PLASTERS

EZYTEX PLASTER – A range of cement-based plasters that can be used to achieve, a spray texture, a sponge finish, or a drag patterned finish. EZYTEX must be finished with a minimum of two coats of INSULCOTE 100% acrylic paint.

FORMSTONE PLASTER – A range of premixed, pre-coloured 100% acrylic plasters that can be used to achieve; a fine spray texture, a medium spray texture, a trowel finish, or a drag patterned finish. Depending on the application it is highly recommended that Formstone is finished with 1 coat of 100% acrylic Formstone Glaze.

ADOBEPLAST – A polymer-modified, cement based plaster used to readily achieve an undulating plaster finish similar to a French provincial style. Adobeplast must be finished with a minimum of two coats of INSULCOTE 100% acrylic paint or other approved paint system.

MULTIPLAST PLASTER – A specially blended polymer modified cement-based plaster compound supplied in 25kg bags to be used for bedding in PVC corner beads, and when sprayed through a hopper gun is used to achieve a medium stucco texture.

INSULCOTE PAINT

A 100% acrylic-based paint formulated for use over cement based plasters.

Other paint systems are not covered by this data sheet and Plaster Systems Ltd will not warrant the use or suitability of alternative paint systems over the surface of its plaster finishes. The chosen paint colour must have a Light Reflective Value (LRV) of no less than 25.

PVC ADHESIVE – FOSROC Panelbond adhesive or Plaster Systems Ltd approved equivalent. A solvent free, synthetic rubber and resin construction adhesive.

EZYPLAST PLASTER

A white gypsum based interior finishing plaster. Finished EZYPLAST surfaces should be sealed with a pigmented alkyl-based sealer prior to painting, or wallpapering.

HANDLING & STORAGE

Bags of plaster must be stored in a dry area, preferably off the floor on timber pallets or timber dunnage. Rotate the stock to ensure that the oldest material is used first. Discard any plaster which is more than six months beyond its manufacturing date.

When transporting bags of plaster, protect the product from getting wet or the bags from being damaged. Do not transport or wrap in a way which could lead to "sweating". Store product in a dry area clear of the floor.

HEALTH & SAFETY

The potential irritant nature of the plaster dust (in dry powder form or from subsequent cutting of the hardened product) is recognised. Paper dust masks and other adequate precautions must be taken when handling and in mixing the plaster. The wet plaster is highly alkaline and prolonged skin contact must be avoided.

SUBSTRATE PREPARATION

THERMAPLAST plaster is designed to be applied to clean **dry** concrete or masonry. Do not pre-wet masonry surfaces and do not apply THERMAPLAST to newly filled blockwork.

EZYPLAST interior finishing plaster requires the same conditions for application as THERMAPLAST plaster. EZYTEX, FORMSTONE and ADOBEPLAST finishing plasters are applied over the THERMAPLAST plaster and require the 20mm thickness of THERMAPLAST plaster to be dry on the surface. Before application of the finishing

plaster, the base coat must be left at least overnight in summer weather to allow the surface to dry out, but during cool or wet periods, this may require several days.

MASKING

Mask out windows, doors, roofing, decks and any other areas where plaster overspray or plaster droppings may occur.

Don't be mean with your protection work. It is a very costly exercise to replace roof areas and glazing because your masking wasn't up to the job.

Use PVC or vinyl tape for masking, wet strength masking paper or preferably plastic sheet material.

PIPES & OUTLETS

Before you start plastering make sure all the plumbing that is going through your walls is in place. If the work can't be finished, at least get short sections installed through the wall so you can seal them off before plastering. This also applies to meter boxes, outside taps, certain light fittings, etc. Use a good quality Modified Silicone sealant. FOSROC MS Silaflex is ideal.

MOVEMENT CONTROL JOINTS

Movement control joints are generally sealed on the outside of exterior walls with a specified system before the concrete or masonry construction is plastered. The sealant system is plastered over and then a uniform vee-joint is struck directly over the control joint.

When the sealant system is going to be applied after the plastering is complete, the movement control joint must be masked off and the plaster system carried up to either side of the joint. The masking is then removed leaving the joint ready for the specified sealant system.

On interior walls the movement control joint will not be sealed, but should have a compressible backing material in the joint. The interior plaster must have a uniform vee-joint struck directly over the control joint in the concrete or masonry construction.

INSTALLATION

The application and finishing of the THERMAPLAST system requires good plastering skills. Plaster Systems Ltd strongly recommends that the work be carried out by a tradesman, plasterer or someone experienced in the application of specialty plaster products.

ESTABLISHING SCREED LINES

Thickness guides must be established at the corners, around openings and at regular spacings along the walls prior to starting any plastering work.

THERMAPLAST PVC corner beads can be used to establish the plaster thickness at external corners. Spot-bond the PVC beads to the blockwork with Panelbond Adhesive. Once the glue has set, bed the beads into place by trowelling MULTIPLAST plaster down both sides of the PVC beads.

Do not rely on just the Panelbond. The PVC beads must be plastered in to prevent movement.

NOTE:

If THERMAPLAST PVC corner beads are used, a layer of 100mm fibreglass mesh reinforcement must be plastered over the completed THERMAPLAST plaster using MULTIPLAST plaster at the external corners to prevent cracking. This reinforced coat is applied over the THERMAPLAST, before the finishing plaster coat is applied.

Around openings use timber straight edges or strips of 60mm wide x 20mm thick polystyrene spot-bonded with Panelbond Adhesive to the reveals, extending 20mm past the face of the blockwork.



In the body of the wall spot-bond 20 x 20mm polystyrene strips vertically at about 2m intervals with Panelbond Adhesive, or a slurry of MULTIPLAST RESIN and MULTIPLAST plaster.

Other setting out alternatives would include traditional plaster thickness daubs in the body of the wall and timber straight edges for the corners and around openings.

MIXING THERMAPLAST

Each 15kg bag of THERMAPLAST plaster is mixed with approximately nine litres of clean drinkable water. Depending on weather conditions and the method of application, a slight variation in the quantity of water may be required. CAUTION - Do not mix to a semi-liquid consistency.

Place all the water for the mix into a suitable container (a cut down 200 litre steel drum is ideal) and add while stirring with powered whisk, all of the THERMAPLAST plaster.

Let the mixed plaster stand for five to 10 minutes and then re-stir before use.

THERMAPLAST can also be mixed in a paddle mixer and to a lesser extent in a concrete mixer. The plaster will tend to cling to the sides of mechanical mixes, however, adequate mixing can be achieved.

If the mixed plaster has been standing for some time, re-stir just before use.

Do not mix more plaster than you can use in one hour. Do not re-activate the plaster with water once it begins to set. Clean the mixing equipment between mixes.

APPLICATION

All plaster depends upon mechanical bond to the substrate. Ensure therefore, that all surfaces to be plastered are free of oil, dirt, lichen or paint. Particularly dense non-absorbent surfaces, such as formed concrete, must be 'key' coated with a splash coat of bonding agent and sand/cement prior to plastering.

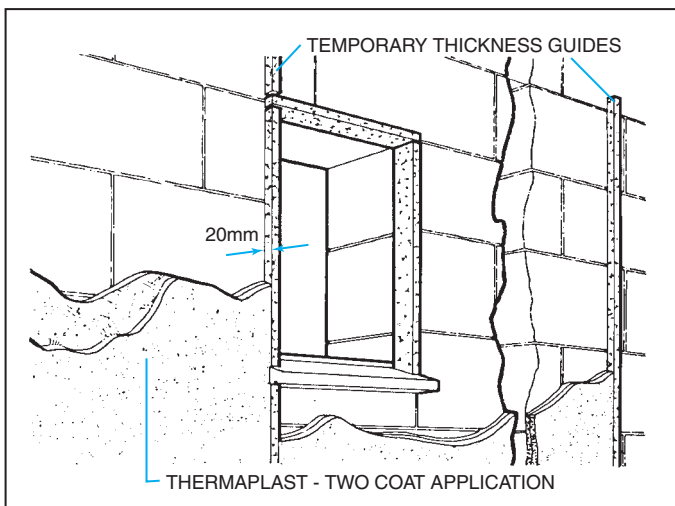
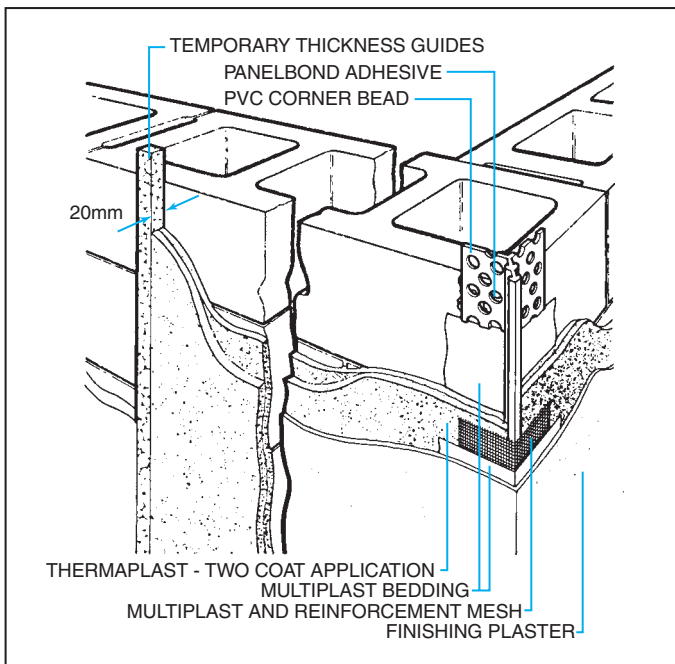
THERMAPLAST must be applied in TWO APPLICATIONS to achieve the 20mm thickness. The first coat being allowed to dry overnight. **Minimum first coat thickness is 10mm - preferably 12 to 15mm.** Trowel on the first coat of THERMAPLAST with good pressure using a double-back technique. The first action will be to trowel on 3-5mm key coat of THERMAPLAST followed by going back over this wet key coat shortly afterwards with another layer of THERMAPLAST. Aim to apply at least half of the total thickness with the first coat.

Do not play with the plaster on the wall, otherwise you may lose the initial suction required to keep the product in place and you therefore run the risk of delamination.

Avoid building this first coat of THERMAPLAST up to the top edge of the thickness guides. This localised build up of plaster next to these guides can cause shrinkage differences once the second coat is applied.

No sooner than the next day, apply the second coat of THERMAPLAST out to the thickness guides. Screenshot excess plaster with a timber or aluminium straight edge. A simple upward wiping action with 100mm wide x 2400mm long straight edge, followed by filling the slacks and a second screeding will leave the THERMAPLAST surface basically flat.

Leave the screeded surface alone until the initial set starts to take up and then float off the surface with a high density polystyrene float or a thick edged yellow polyurethane float. This will compact the surface and finish the levelling process.



Dig out the polystyrene thickness strips from the body of the wall the next day and fill in the gaps with THERMAPLAST. The strips will show shrinkage cracks. These can be skimmed over first prior to the overall skim coat of finishing plaster.

BLOCK WORK REVEALS

Generally there is no room for the application of any THERMAPLAST plaster around the reveals of openings. These surfaces are simply coated with a 3-5mm thick skim coat of TECSTOP prior to the application of the chosen finishing plaster.

CURING

THERMAPLAST plaster must only be applied when the temperature is between 5 and 35°C and it must be protected from rain for the first 24 hours.

Do not let THERMAPLAST plaster dry out completely for the first 48 hours.

FINISHING

THERMAPLAST is not suitable as a finishing plaster and must be overcoated with a compatible finishing plaster supplied by either Plaster Systems Ltd or a Plaster Systems Ltd approved distributor.

EZYTEX, FORMSTONE or ADOBEPLAST plasters are ideal for this purpose.

Ensure that the THERMAPLAST surface is completely dry and remove any loose aggregate by brushing the surface before overcoating it.

Refer to the TECHNICAL DATA SHEET for the chosen finishing plaster for detailed mixing and application methods.

PAINTING

When the THERMAPLAST base coat of plaster has been finished with EZYTEX or ADOBEPLAST plaster, the plaster finish must be painted with two coats of INSULCOTE 100% acrylic paint.

MIXING & APPLICATION – INTERIOR SURFACES

Interior concrete or masonry surfaces are coated with EZYPLAST interior finishing plaster leaving the walls ready for a paint or a wallpaper finish.

NOTE:

The EZYPLAST surface must be sealed before wallpapering or application of a finishing paint. A pigmented alkyd-type sealer is recommended. Refer to the EZYPLAST TECHNICAL DATA SHEET, dated January 2005 for detailed mixing and application methods.

Technical Data Sheets are available free by simply phoning toll free 0800 11 44 00.

MAINTENANCE

CLEANING

The finished THERMAPLAST system should be regularly hosed down on the exterior wall surfaces. Localised grime or ingrained dirt may be removed by cleaning with a suitable detergent and water.

The exterior surface can also be cleaned with a low pressure water blaster using a fan water jet and a cleansing agent.

Inside, the EZYPLAST interior plaster will have been painted or wallpapered and normal cleaning methods will apply.

RECOATING

On the outside, the wall surfaces must be protected by a well-maintained coating system compatible with a cement-based plaster. The finish coating must not form a vapour barrier.

INSULCOTE painted surfaces will need repainting after several years. Simply clean the painted wall surfaces with a suitable chemical or detergent wash and rinse off. Ensure any lichen or moss growth is removed and any loosely adhered paint is wire brushed off. Repaint with two coats of INSULCOTE paint.

For further information regarding maintenance please refer to Plaster Systems PlasterCare Maintenance Guide.

MANUFACTURING & SUPPLY

All the plaster components of the THERMAPLAST Masonry Home Insulation System are manufactured by Plaster Systems Ltd. THERMAPLAST, EZYTEX, MULTIPLAST, FORMSTONE, ADOBEPLAST and EZYPLAST plasters, and INSULCOTE paint are available from Plaster Systems or one its many licensed distributors.

Please check with Plaster Systems Ltd to see if there is a supplier in your area.

TECHNICAL ADVICE

An advisory service is available to specifiers and applicators of the THERMAPLAST Masonry Home Insulation System.

Simply contact Plaster Systems Ltd on their toll free phone service – 0800 11 44 00.

**THERMAPLAST, MULTIPLAST, FORMSTONE, ADOBEPLAST, EZYTEX,
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