

# MAXRAPID PLUG

**Rapid setting cement based, water leak plugging mortar**

Maxrapid Plug is supplied as a ready to use blend of dry powders which requires only the addition of clean water at site to produce a highly consistent, rapid setting mortar which is easy to apply in many difficult conditions. The material is based on a blend of cements, graded aggregates, special fillers and chemical additives which control the rate of set and minimises the risk of thermal cracking.

## Uses

For the rapid temporary patching and plugging of concrete segments, concrete and brick tunnel linings, sewage systems, below ground access chambers, pipes, basements, foundations and mines.

## Benefits

- Emergency water stopping capability
- Single component - only the addition of clean water is required.
- Excellent bond to the substrate
- Low exotherm minimizes thermal cracking
- Pre-packed formulation to overcome variation in site batching
- Contains no chloride admixtures.

## Technical support

Thermax offers technical support service to specifiers, end users and contractors, as well as on-site technical assistance in locations all over the country.

## Design criteria

Maxrapid Plug can be applied to horizontal, vertical or overhead surfaces at a wide range of thicknesses. Generally, the volume of mixed material used in a single application is restricted to that which can be applied by trowel or gloved hand. Thicker sections can be built up in layers. If any doubt arises about the nature of the substrate, consult the local Thermax office for further information.

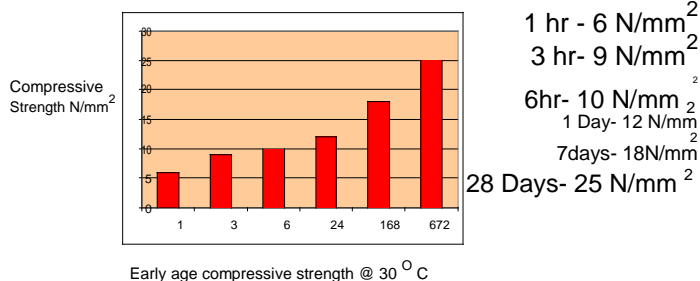
## Properties

**Initial set time** : Approx. 1- 2 mins. at 30°C

Note : Set times will be extended when mixed or applied at lower temperatures.

**Compressive strength:** 25N/mm<sup>2</sup> @ 28 days @ 30° C

**Heat generation characteristics:** High heat output (exotherm) leads to undesirably high shrinkage and consequent thermal cracking. The curves below show the low heat output of Maxrapid Plug which minimizes the risk of shrinkage and thermal cracking.



## Specification clauses

### Water stopping mortar

The water stopping mortar shall be Maxrapid Plug, a single component cement based product to which only the site addition of clean water shall be permitted. It must be chloride free and shall have a low exotherm to minimize thermal cracking.

## Instructions for use

### Preparation

Areas to be patched should be cut back to a depth of 15mm and given a good mechanical key. Feather edges must not be allowed. Surface should be brushed clean to remove loose material, dust and laitence. Grease, slime or mould growth should be removed by steam cleaning or high pressure water jetting. A proprietary degreasing agent should be used for removal of light oil or grease contamination.

To seal leaks, crack openings must be chased out to approximately 20mm. The chase should always be undercut to avoid leaving a V-section. All loose material and debris should be removed.

### Mixing

Maxrapid Plug should be added to clean water in the following proportions :

One part clean water : 3 parts Maxrapid Plug (measured by volume)

Mix to a stiff consistency in a suitable container using a trowel or gloved hand. Due to the rapid set characteristics of the product, only prepare a quantity of mortar which can be placed within the prescribed set time.

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## Application

Trowel apply or hand-knead the mixed mortar in place, ensuring maximum contact with the substrate before the material sets. If being used to plug running water, Maxrapid Plug should be used and held in place until the initial set is reached.

## Cleaning

Maxrapid Plug should be removed from tools, equipment and mixers with clean water prior to the initial set. Cured material can only be removed mechanically.

## Limitations

Maxrapid Plug should not be used when the temperature is below 10°C and falling.

## Health and Safety Instructions

Maxrapid Plug contains cement powders which, when mixed or become damp, release alkalis which can be harmful to the skin. During use, avoid inhalation of dust and contact with skin and eyes. Wear suitable protective clothing, gloves, eye protection and respiratory protective equipment. The use of barrier creams provide additional skin protection. In case of contact with skin, rinse with plenty of clean water, than cleanse with soap and water. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed, seek medical attention immediately do not induce vomiting.

### Fire

Maxrapid Plug is non-flammable.

## Storage

### Shelf life

Maxrapid plug has a shelf life of 6 months if kept in a dry store in the original, unopened bags.

## Packing

Maxrapid Plug is supplied in 5kg & 30kg.

## Other segments :

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives
- Cement Grinding Aids

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