

# THORO<sup>®</sup> WATERPLUG

(Internationally known as MASTERSEAL<sup>®</sup> 590)

## Ultra Rapid Setting Mortar to Plug Active Water Leaks

### Description of Product

THORO<sup>®</sup> WATERPLUG, when mixed with clean water, provides a ready to use ultra rapid setting durable plugging mortar for active water leaks in concrete and masonry. The material expands as it cures to form a watertight seal with similar characteristics to concrete.

### Fields of Application

THORO<sup>®</sup> WATERPLUG is used to stop active water or seepage under pressure through joints, cracks and holes in concrete or masonry, where a normal mortar would be washed away and resin mortars would not bond.

### Areas of use include:

- As a seal for construction joints or floor joints prior to basement tanking with THOROSEAL<sup>®</sup>.
- For instant sewer connections
- For sealing cracks and construction joints in reservoirs and other water retaining structures
- For rapid anchoring of bolts, conduits, pipes, railings, sanitary equipment, etc.
- Joint filling, pointing between concrete segments in concrete and brick tunnels, sewage systems, pipes and mines.

### Features and Benefits

- Ultra-rapid set, instant plugging of leaks
- Requires the addition of water only
- Expands as it sets, ensuring a permanent watertight seal
- Similar characteristics and compatible with concrete
- Chloride-free
- Does not promote corrosion of the reinforcement

### Technical Data/Typical Properties<sup>(a)</sup>

Wet Density, kg/m <sup>3</sup>	2140
Maximum particle size, mm	0.8
Compressive strength, N/mm <sup>2</sup>	
30 minutes	13.8
24 hours	31.0
7 days	44.3
28 days	52.8
Flexural strength, N/mm <sup>2</sup>	
30 minutes	2.7
24 hours	6.1
7 days	6.3
28 days	7.0
Tensile strength, N/mm <sup>2</sup>	
28 days	3.3

<sup>(a)</sup> Typical value at 20°C

### Application Procedure

#### Preparation of Substrate

Preferably, cracks or holes should be cut out to a minimum width and depth of 20mm, cutting the sides as square as practicable. Undercut if possible. Avoid leaving a V-section. Do not feather-edge.

Flush out the hole or crack with water at high pressure in order to remove all loose particles and dust.

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All surfaces must be dampened with clean water immediately prior to the application of THORO® WATERPLUG.

#### Mixing and Application

Mixing should only be done by hand.

#### For plugging active leaks:

Mix, in a rubber bowl, only sufficient material (0.5kg) that can be placed by hand in one application.

Mix quickly and well to a stiff consistency (approximately 1 part of water to 4 parts of THORO® WATERPLUG by volume). Do not overmix.

Hold the material in the hand until slight warmth is felt or setting occurs.

Then press THORO® WATERPLUG mortar firmly into the opening; exert full pressure, without moving the hand or trowel.

Do not remove the hand too quickly.

If the opening is too big to be closed with 0.5kg of THORO® WATERPLUG, work from the sides to the middle, following the above procedure.

After stopping the active water, trim off the patch so that it is uniformly level with the surrounding wall surfaces.

For sealing cracks at the junction of floor and wall in an existing construction:  
Cut out the crack at least 20mm wide and deep, cutting back into the wall slightly.

Flush away all cuttings and dirt.

Force THORO® WATERPLUG mortar into the prepared crack and smooth it out.

Form a 45° cove or fillet at the junction of floor and wall of approximately 35-45 mm.

#### For sealing the junction between a concrete floor and a masonry wall in new construction:

Form a rebate throughout the basement and sub-basement rooms and pits by inserting a strip of wood

20mm x 20mm at the junction of vertical masonry walls and the concrete floor slabs.

The top edge of the strip should be laid true and level with finished concrete floors and left in place until fresh concrete has cured.

Remove the wood strip previously inserted.

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Wash the groove with clean water from a hose pipe to remove debris.

Fill the groove with THORO® WATERPLUG mortar mixed to a stiff consistency; force or tamp it into place with a round-nosed tool to form a cove between the floor and wall.

Keep the THORO® WATERPLUG mortar damp for 15 minutes if no active water is present.

To repair leaking mortar joints and cracks in masonry walls, or cracks in concrete walls:  
Cut out the defective mortar joints or cracks to a minimum width and depth of 20mm.

Undercut if possible.

Force THORO® WATERPLUG into the crack and keep it damp for at least 15 minutes.

For holes, blisters, patches, honeycomb and other construction faults in concrete walls:  
Remove all tie wires, wood or steel separators by cutting back the concrete from the surface to a depth of 25mm.

Mix THORO® WATERPLUG with water to the consistency of stiff mortar and fill all holes, blisters, patches, honeycombing and other construction faults flush with the surrounding surfaces.

Scratch the finish for later applications. (If there is no active water present, THORO® THORITE patching material can be used).

For anchoring bolts or metal posts in concrete or masonry:  
Drill a hole deep enough to secure the bolt or post properly and large enough so there is at least 10mm on all sides of it.

Fill the hole with THORO® WATERPLUG mortar and tamp it down so that the entire hole is full.

Immediately centre the bolt or post over the hole and force it into the THORO® WATERPLUG mortar.

Tamp the THORO® WATERPLUG mortar firmly around the bolt or post and keep moist for 15 minutes.

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**Curing**

Final setting time, 2 – 4 minutes.

Once the placed THORO® WATERPLUG mortar has stiffened sufficiently, dampen with clean water and maintain in a damp condition for a minimum of 15 minutes.

**Coverage**

1kg of powder will fill approximately 585cm<sup>3</sup> or a joint 20mm x 20mm x 1.45m.

**Packaging**

THORO® WATERPLUG is available in 5kg cans and 25kg pails.

**Storage**

All materials should be stored under cover, clear of the ground and stacked not more than 4 pails high. Protect the materials from all sources of moisture and frost.

**Shelf Life**

Rotate stock in order not to exceed the shelf life of 12 months. Once opened the material should be used as soon as possible.

**THORO® WATERPLUG Degussa Construction Chemicals UK Version 3****Health and Safety**

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

**Solvent Based Products**

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

**Powder Products**

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes, which should be protected during use.

**Resin Products**

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

**Spillage**

Chemical products can cause damage; clean spillage immediately.

**Disclaimer:**

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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