



The Chemical Company

# THOROSEAL® TR

## Masterseal® 581

**Cement and Acrylic Based Dual Component Water Insulation Material That Can Be Applied From Negative - Positive Direction**

### Description of Product

**THOROSEAL® TR** is a cement and acrylic based polymer dual component capillary effective water insulation material used on concrete surfaces and applied from the inside or outside, negative and positive directions against leaking and surface waters.

### Fields of Application

- In inner and outer areas for vertical and horizontal applications.
- In wet volumes like WC, bathroom, kitchen, and balcony.
- In water insulation of foundations and curtains.
- In water tanks.
- In tunnels.
- In half-olympic swimming pools.
- In elevator dips.
- In reinforced concrete pipes.
- To protect concrete from water, carbonation, and deicer salts.
- In brine pools.

- In fishponds.
- In food depots.
- In insulation of flower gardens.

### Features and Benefits

- Resistant to negative and positive water pressures (4 bar negative - 7 bar positive).
- High durability.
- **THOROSEAL® TR** has capillary effect.
- Long working time.
- Non-shrinking and non-cracking.
- Water vapor permeable.
- Very high adhesion strength. Works together with the surfaces it adheres on.
- Easy to prepare and apply.
- Resistant to freezing - thawing cycle.
- Applied by brush or spraying machine.
- Can be safely used in drinking water tanks (has a test report).

*Certified by Hacettepe University Turkish Doping Control Center and Chemical Analysis Laboratory, and consistent with BS 6920 Standard Analysis Report.*

### Technical Data

|   |   |    |
|---|---|----|
| Structure of the Material<br><b>THOROSEAL® TR</b> Component A<br><b>Acryl® 60</b> Component B | Mineral sealant, polymer modified admixtures and special cements.<br>Copolymer acrylic dispersion |    |
| Color   | Gray  | KR |
| Adhesion Strength   | ≥ 1.50 N/mm <sup>2</sup> (28 days)  |    |
| Resistance to Pressurized Water   | 4 bar Positive<br>7 bar Negative  |    |
| Water Vapor Permeability (H <sub>2</sub> O)   | 86 - 120  |    |
| Application Ground Temperature  | +5°C +25°C  |    |
| Service Temperature   | -20°C +80°C   |    |
| Maturity Period   | 3 - 5 minutes   |    |
| Usage Period  | 45 minutes  |    |

*Obtained in +23°C, 50% relative humidity conditions. Higher temperatures decrease the time, lower temperatures increase the time.*



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### Application Procedure

#### Preparation of Substrate

Cement based surfaces of the structures contacting with water have to be strong, dry, bearing, dustless, clean, and also in balance. Surface must be cleaned off all kinds of oil, grease, rust, and paraffin traces that can weaken adherence and no loose particles must be present. Iron and wooden wedges on the surface have to be removed, and active water leakages and spaces must be filled by **Waterplug®**, **Polifiks®** or **Emaco® S88 C** if present. Corners and sides must be beveled with minimum 4 cm radius bevels. Application surface has to be wetted well and then waited until it becomes wet/dry. If the coating material losses its water rapidly and turns dull, this means the surface is not wetted well or dried rapidly. In these instances where the weather is hot or materials are exposed to wind, mixture water can be increased for 10% just for the first layer.

#### Mixing

Liquid component B (**Acryl® 60**) and mixture water stated in the table are poured into a clean mixing container and powder component A (**THOROSEAL® TR**) is added to this mixture slowly. The mixture is mixed with a 400 - 600 RPM mixer at least for 3-5 minutes until a homogenous and uniform mixture is obtained. After waiting for 3-5 minutes, the mixture is mixed again for approximately 30 seconds, and becomes ready to use.

#### Mixing Ratios

| THOROSEAL® TR      | Comp. A        | Comp. B | Mixture Water |
|--------------------|----------------|---------|---------------|
| Amount of Mixture  | 25 kg          | 2 kg    | 5,00-5,50 kg  |
| Density of Mixture | ~1,98 kg/liter |         |               |

### Application Method

Prepared **THOROSEAL® TR** mixture is applied by Thoro brush or trowel as two or three layers. Brush application direction in each layer must be perpendicular to each other. Waiting period between each layer changes depending on environmental conditions.

For netting application on corners **THOROSEAL® FX 100 TR** has to be used. First layer is applied by Thoro brush. After it dries, water insulation netting is laid, and second and third layers are applied.

#### Coverage

Coverage of First Layer : 1.30 kg/m<sup>2</sup> mixture  
Coverage of Second Layer: 1.20 kg/m<sup>2</sup> mixture  
Coverage of Third Layer : 1.20 kg/m<sup>2</sup> mixture

#### Watchpoints

- If surface temperature is below +5°C or over +25°C in **THOROSEAL® TR** application, then suitable temperatures must be waited for. Also application should not be made in very hot, rainy or windy weathers.
- **THOROSEAL® TR** applied in +23°C gains mechanic strength after 2 days, becomes impermeable to water after 7 days, and gains final strength after 14 days.
- In outer surface applications, the surface has to be protected from sun, wind, frost or rain during the first 24 hours.
- Working and reaction time of cement and acrylic based systems are affected by environment and ground temperature, and relative humidity in the air. Low temperatures slow down the chemical reaction, and increase working period, coating time, and work time. Also coverage decreases because viscosity increases. High temperatures accelerate the chemical reaction and times stated above are reduced depending on this. For the material to complete its curing, environment and ground temperatures must not fall down below the minimum allowed value.
- Wet film thickness must not pass 1.30 mm in single layer.

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- The surfaces that will be walked on have to be coated by **Binder® 5** grout.
- **BASF Yapı Kimyasalları San. A.S.** adhesives are recommended for pavements.

### Cleaning of Tools

All the tools and equipments must be cleaned by water after the application. After **THOROSEAL® TR** is hardened, it can only be removed from the surface mechanically.

### Packaging

Component A : 25 kg polyethylene reinforced kraft bag.  
Component B : 2 kg plastic drum

### Storage

Must be stored in unopened original packing, and in cool and dry environment protected from freezing. In short-term storing, maximum 3 palettes can be stowed on top of each other and delivery has to be according to first in first out system. In long-term storing, the palettes must not be stowed on top of each other.

### Shelf Life

12 months after the production date under appropriate storing conditions. **Acryl® 60** is frozen under 0°C Opened packages have to be stored by tightly sealing the bag/cover, and must be used in one week.

### Health and Safety Precautions

Work cloth, protective gloves, goggles and masks concordant with Work and Worker Health rules must be used during the application. Due to irritant effects of the non-cured material, avoid contact to skin and eyes during storing and application. If such a contact occurs, it must be washed by soap and plenty of water. Consult a physician urgently if swallowed. Food and drink must be kept outside the application areas. Must be stored away from children. Please look at the Material

Safety Data Sheet for detailed information.

### Disclaimer

This information given here is true, represents our best knowledge and is based not only on laboratory work, but also on field experience. However, BASF Yapı Kimyasalları San. A.S. is only responsible from the quality of the product. BASF Yapı Kimyasalları San. A.S. cannot be hold responsible from the results caused by applications of the product not in accordance with the written suggestions of how and where to use the product and/or faulty applications. This technical document is valid until a new one is printed and abates the previous editions. 01/2008.

