

PRS.0142

## RINGSEAL T21

Hydro-expansive rubber seal for spacers of the tubular formwork

### Customs Code

4016 9300

### Packaging

- Small bag 100 unit

### Application

- Apply by hand

Family  
Proseal

Product Lines

- Aqua
- Building
- Infratech

Components  
Single-component

Type  
Hydro expansive rubber products

Functional Categories

- Instantaneous stoppage of water infiltrations in buildings
- Waterproofing underground structures with hydro-expansive products
- Structural maintenance of dams, reservoirs, ducts and water ducts
- Structural maintenance of tunnels
- Construction of underground works in high performance waterproof concrete

Appearance  
Gasket

## General description

RINGSEAL T21 is an o-ring made with a specialised hydro-expansive rubber that in contact with the water reacts by increasing its own initial volume. RINGSEAL T21, used in combination with a tubular spacer for metal formwork, hermetically seals any discontinuities which could easily settle in the concrete due to the presence of the spacer, and which would compromise the watertightness of the masonry itself.

## General features

In the standard version the seal RINGSEAL T21 is designed for tubular spacers with 21.5 mm inner diameter (without external ribs), normally used in the construction industry and usually having an outer diameter of about 24 mm. Given the elasticity of the seal, greater diameters up to about 30 mm are tolerated.

## Dosage

No. 1 RINGSEAL T21 gasket for each tubular formwork spacer (average 1 - 2 pieces per square metre for metal formworks).

## Fields of application


Construction of subterranean structures in concrete by metal formwork, where the wall is in direct contact with the ground and where there is the presence of waterproofing layers outside the masonry itself: basements, garages, underground rooms, etc.


## Basic features

 Diameter:  
21 mm

 Nonflammable

 Suitable for contact with drinking water

 Available colours  
Blue

 Hydroexpansive product:  
+200 / +900 %

 Shelf-life:  
24 months

 UV-resistant

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## Applicable on

Concrete, Tubular spacers for steel formworks

## Instructions for use

Manually place the hydro-expansive seal RINGSEAL T21 around the spacers of the formwork, in a central position. Build the planned formwork using the tubular spacers thus prepared and proceed with the usual operations of casting the concrete.

## Storage and preservation

Store the product in its original packing, in a fresh and dry environment, avoiding frost and direct sunlight. Protect from humidity.



## Expansion test results

RINGSEAL T21 has been tested with four different types of aqueous solutions:

- demineralised water
- groundwater (obtained with the concentrations limit pursuant to Legislative Decree 152/06: Ph 7.7 , sulphates 250 mg/l nitrate 50 mg/l, chlorides 200 mg/l, iron 0.2 mg/l, manganese 0.05 mg/l, nickel 0.2 mg/l)
- salt water (NaCl at 3.6%)
- base solution Ph 12.0 (to simulate the conditions in contact with concrete)

In the experimental tests of immersion in the solutions described, the product displayed a change in average volume at 25 days not less than 190% in the case of salt water and reached a theoretical expansion greater than 1000% for demineralised water. The change in volume is calculated as  $(V_f - V_i) / V_i$  (thus an expansion of 200% is equivalent to a triple final volume compared with the initial volume).

## Warnings, Precautions and Ecology

The general information, along with any instructions and recommendations for use of this product, including in this data sheet and eventually provided verbally or in writing, correspond to the present state of our scientific and practical knowledge.

Any technical and performance data reported is the result of laboratory tests conducted in a controlled environment and thus may be subject to modification in relation to the actual conditions of implementation.

Azichem Srl does not assume any liability arising from inadequate characteristics related to improper use of the product or connected to defects arising from factors or elements unrelated to the quality of the product, including improper storage.

Those wishing to utilise the product are required to determine prior to use whether or not the same is suitable for the intended use, assuming all consequent responsibility.

The technical and characteristic details contained in this data sheet shall be updated periodically. For consultation in real time, please visit the website: [www.azichem.com](http://www.azichem.com). The date of revision is indicated in the space to the side. The current edition cancels out and replaces any previous version.

Please note that the user is required to read the latest Safety Data Sheet for this product, containing chemical-physical and toxicological data, risk phrases and other information regarding the safe transport, use and disposal of the product and its packaging. For consultation, please visit: [www.azichem.com](http://www.azichem.com).

It is forbidden to dispose of the product and/or packaging in the environment.

Do not use RINGSEAL T21 with spacers with outer diameter less than 23.5 mm. Further, spacers with protruding external ribbing cannot be used, as their non-circular shape does not allow the protective sealing to adhere to the outer surface of the spacer, making it ineffective.

In cases of expansion with very marked changes in volume (>500%), and in the absence of restrictive conditions, there may be some lacerations of the seal; these phenomena do not compromise the features that protect the protective sealing at all, and they especially do not occur under normal operating conditions, i.e. when the seal is inserted in confined spaces.

*RINGSEAL T21 is produced/distributed by*



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