

## Tardigrade ERSG 900

Epoxy Based, Two Component, Solvent Free, Thixotropic Repair and Filling Gel

### Description of Product

Tardigrade ERSG 900 is an epoxy based, two component, solvent free thixotropic repair and filling gel. It is used to repair cracks between 1 and 3 mm and filling the gaps.

### Fields of Application

- Natural stones, marble and granite surfaces,
- Terrazzo surfaces,
- Epoxy and polyurethane surfaces,
- Cement based vertical and horizontal surface joints,
- Repair and strengthening of hairline cracks

### Advantages

- Solvent free,
- Gel consistency
- Easy application
- Do not sag on vertical surfaces
- Very high bond strength
- High mechanical and chemical resistance
- Fills the pinholes easily

### Appearance

Part A (Epoxy Resin) : Paste - Creamy  
Part B (Epoxy Hardener) : Paste - Creamy

### Packaging

Part A : 20 kg. net - Part B : 20 kg. net  
Total Set : 40 kg. net - Total Set : 43,33 kg. gross

Part A : 4 kg. net - Part B : 4 kg. net  
Total Set : 8 kg. net - Total Set : 9,02 kg. gross

### Storage

Store in original sealed containers in a dry environment at temperatures between +10°C and +30°C. Palettes should not be placed on top of each other during long term storage.

## TECHNICAL DATA SHEET

Preparation Date: 30.05.2014

Revision Date: 02.11.2018

Revision No: 2

Page No: 2 / 4

### Shelf Life

Minimum 12 months from date of production if stored in original unopened containers. Once opened, product should be consumed within one week as it is stored under appropriate storage conditions.

### Chemical Structure

Part A : Epoxy Resin

Part B: Epoxy Hardener

### Technical Specifications

All technical values were calculated based on +23°C and 50% relative humidity. Temperature and humidity changes would change technical values.

### Tardigrade ERSG 900 Technical Data

|                              |  |
|------------------------------|--|
| Density                      | Mixed Resin: 1,45 kg/liter ( $\pm$ %3)                 |
| Viscosity                    | Mixed: > 25.000 mPa.s                                  |
| Shore D Hardness             | 7 days: 75-85 (ASTM D2240-05)                          |
| Compressive Strength         | 28 days: > 90 N/mm <sup>2</sup> (ASTM D695-10)         |
| Flexural Strength            | 7 days: > 35 N/mm <sup>2</sup> (ASTM D790)             |
| Bond Strength                | 7 days : > 3 N/mm <sup>2</sup> (Concrete) (ASTM D7234) |
| Abrasion Strength            | 7 days : <50 mg (CS 10/1000/1000) (ASTM D4060 - 14)    |
| Duration of Use After Mixing | 50-70 minutes  |
| Total Curing Time            | 7 days   |

### Preparation of Substrate

Concrete substrates must be sound and of sufficient compressive strength (minimum 25 N/mm<sup>2</sup>) with a minimum pull off strength of 2,0 N/mm<sup>2</sup>. The residual moisture content of the substrate must not exceed 4%, the substrate temperature should remain a minimum of +8°C and the temperature of the substrate must be at least +3°C above the current dew point temperature.

The substrate must be clean, dry and free of all contaminants such as dirt, oil, grease, coatings and surface treatments, etc. Oil-contaminated substrates must first be pre-cleaned with an emulsifying cleaning detergent in accordance with the supplier's instructions.

Finally, the concrete or cement screed surface is cleaned using high-pressure water jetting. Excess water is removed from the surface by wet and dry vacuum cleaner. Plaster on the surface should be removed to see the crack. Any damaged joints, shrinkage cracks and / or the building cracks should be opened in V-shape with the help of hammer

## TECHNICAL DATA SHEET

Preparation Date: 30.05.2014

Revision Date: 02.11.2018

Revision No: 2

Page No: 3 / 4

drill. If in doubt of the surface, apply a test area first. Should not be applied to wet or frozen surfaces and surfaces with high humidity. After the surface preparation is completed, the concrete floor is primed using the appropriate Tardigrade primer material and ready for top coat application.

### Application Conditions

During the application, ambient temperature should be between +10°C and +30°C. Relative Air Humidity should not exceed 80% and the substrate temperature should be between +8°C and +30°C. The residual moisture content of the substrate must not exceed 4 %. The substrate must be at least +3°C above the current dew point temperature.

### Mixing

Make sure that the product temperatures are between +10°C and +30°C before starting the mixing procedure. Prior to mixing, stir part A and B separately with a mechanical drill and paddle at a very low speed. Add component B gradually into component A and mix till you reach a homogeneous consistency. (Approximately 3 minutes)

Pour the contents into a clean container and stir for another couple minutes at a low speed to obtain a mixture and prevent possible mixture failures. Please avoid mixing on high speed and long time, and do not add any solvent, thinner etc. into the mixture during the application procedure.

### Application Procedure

With the above mentioned ideal surface and weather conditions;

Avoid application under excessive wind and/or rain when the ambient temperature is below +10°C or above +30°C. Heaters should be used to increase the ambient temperature and the workability of the product, when necessary. A surface which does not have sufficient waterproofing should not be coated.

The complete blend of Tardigrade ERSG 900 should be applied homogeneously on the surface which required preparations was done with the help of steel spatula and / or rubber spatula. Application thickness should be between 1 - 3 mm, which should be pinhole free. Make sure that there is a non-porous layer that completely covers the surface.

Mixed product should be applied in max. 30 minutes in about +23°C. Waiting time between coats should be minimum 10 hours in +23°C and maximum 48 hours. If waited more than 48 hours, the surface should be grinded. The product would be completely cured in a minimum of 7 days to reach its maximum mechanical and chemical resistance.

In case heating is needed, do not use gas, oil, paraffin or other fossil fuel heaters. Use only electric powered warm air blower system.

Reaction times of resin based systems depend on ambient conditions. The duration of the chemical reaction and the duration of the work also change accordingly. Therefore, this detail should be considered properly during application. Under lower temperatures reaction times are longer which increases pot life, coating interval and working time.

After application, the material should be protected from direct contact with water for a minimum of 48 hours. Within this period, contact with water can cause a surface carbonation and/or surface tackiness, both of which must be removed. In such cases, overall coating should be removed from the floor and renewed.

## TECHNICAL DATA SHEET

Preparation Date: 30.05.2014

Revision Date: 02.11.2018

Revision No: 2

Page No: 4 / 4

Epoxy and polyurethane flooring systems, should be performed by expert contractors.

### Cleaning of Tools

Clean all tools and application equipment with thinner immediately after use. Hardened/cured material can only be mechanically removed.

### Coverage

Tardigrade ERSG 900 A + B mixture is used in coating systems and its consumption varies according to usage of it in the system. Please refer to the system recommendations for proper consumption quantities.

*\*Consumption increases as the viscosity gets higher in lower temperatures.*

### Health and Safety Information

The following protective measures should be taken as per Occupational Health and Safety (OHS) regulations when working with the material. Safety gloves, goggles and protective clothing should be worn. Due to irritation effects of the uncured material, components should not come in contact with the skin, mouth or eyes.

In cases of contact the affected area should be washed with plenty of water and soap. If swallowed, seek medical attention immediately. Do not drink or eat at the application site. Keep out of reach of children. For detailed information please refer to the safety information form (safety data sheet).

### Product Liability

Tardigrade Construction Chemicals Inc. is just responsible for the quality of the Tardigrade labelled products. All the data referred herein are gathered as a result of practical and scientific studies. Tardigrade cannot be legally obligated or responsible for any damage unless correct product is used accurately in suitable areas and under right conditions.

### Legal Notes

All the information and references herein regarding Tardigrade labelled products are provided in good faith, if kept and interfered in accordance with normal conditions, recommendations, and with knowledge and experience. Along with products, areas of use and surfaces can cause many differences. It is necessary to make sure that the right products with Tardigrade trademark are applied on suitable surfaces under normal conditions. Moreover, all the above given information and instructions regarding technical compatibility with commercial factors must be strictly followed. The manufacturer cannot be held responsible for any damage or problems that may arise if not followed. The applicator / user is obliged to carry out the relevant checks to ensure about these details. The specifications of the Tardigrade branded products may be changed if necessary. The property rights of third parties must be observed. All the technical requirements for sale and shipping are valid when the order is approved.