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Tardigrade PRGF 900

Two Component, Solvent Free, Polyurethane - Polyurea Hybrid Based Filling Mortar

Description of Product

Tardigrade PRGF 900 is two component, solvent free, polyurethane - polyurea hybrid based, cold applied structural filling mortar.

Fields of Application

- Industrial floors, on cracks occurred in asphalt and concrete roads
- Parking lots, highways, joint repairs and airport concrete runway, where high resistance to oil and fuel is important
- Connection joints of aboveground oil storage and loading ramps
- Connection joints of concrete materials
- Joints on industrial floors

Advantages

- Solvent free
- Easy to apply
- Resistant to thermal shocks
- High bond strength
- High mechanical and chemical resistance, especially against jet fuel and industrial oils

Appearance

Part A (Resin) : Liquid - Gray
Part B (Hardener) : Liquid - Yellow

Packaging

Part A : 25 kg. net – Part B : 25 kg. net
Total Set : 50 kg. net – Total Set : 53 kg. gross

Part A : 0,30 kg. net – Part B : 0,30 kg. net
Total Set : 0,60 kg. net – Total Set : 0,75 kg. gross

Storage

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

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Shelf Life

Minimum 12 months for part A and 9 months for part B 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 Properties

Part A: Polyurethane – Polyurea Hybrid Resin Part B: Polyurethane – Polyurea Hybrid 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 PRGF 900 Technical Data

Density	Mixed Resin: 1,20 kg/liter (\pm %3)
Viscosity	Mixed: 1.000-2.000 mPa.s
Shore A Hardness	7 days: 70 - 80 (ASTM D2240-05)
Elongation at Break	7 days > % 300 (ASTM D638)
Bond Strength	7 days : > 2,5 N/mm ² (Concrete) (ASTM D7234)
Abrasion Strength	7 days: < 30 mg (CS 10/1000/1000) (ASTM D4060 - 14)
Duration of Use After Mixing	5 - 20 Minutes
Total Curing Time	7 days

Preparation of Substrate

Concrete substrates must be sound and of sufficient compressive strength (minimum 25 N/mm²) with a minimum pull off strength of 2,0 N/mm². 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. Capillary pores where in the concrete surface should be filled. Oil-contaminated substrates must be pre-cleaned with an emulsifying cleaning detergent in accordance with the supplier's instructions. Then the surface is cleaned using high-pressure water jetting. Excess water is removed from the surface by wet and dry vacuum cleaner.

Cleaned surface must be scraped with a suitable method either grinding, shot blasting or sanding and the surface must be roughed. After the mechanical cleaning, the dust layer should be swept with the help of industrial vacuum cleaners. If in doubt of the surface, apply a test area first. Do not apply on wet or frozen surfaces and surfaces with high humidity.

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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 +10°C and +30°C. The residual moisture content of the substrate must not exceed 4 %. The substrate temperature must be at least +3°C above the current dew point temperature. If needed, before applying Tardigrade PRGF 900, the substrates should be primed with appropriate Tardigrade materials.

Mixing

Make sure that each product temperatures are between +10°C and +30°C before starting the mixing procedure.

Mix the components A and B separately with the low speed mixer until they become homogenous (approximately 3 minutes).

Pour the contents into a clean container and mix for another couple minutes. Please avoid mixing on high speed and do not add any solvent, etc. into the mixture during the application procedure.

Application Procedure

With the above mentioned ideal surface and weather conditions;

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

After completion of the individual mixture of components A and B;

- In systems with two-component automatic dosing pump, A component to the A part of the pump system and B component in to the B part of the pump system must be transferred separately. Joints are filled with the help of a double component automatic mixing gun.
- For cartridge applications, the cartridge should be shaken for 3 minutes. Then, previously opened joint gaps are filled with the help of the cartridge gun.
- If desired, components A and B can be mixed in a single container and poured into joint gaps within the appropriate time.

Width of the joints should be between 10 to 35 mm. Masking tape should be removed in 40 minutes. On surfaces to be exposed to traffic load, Tardigrade PRGF 900 should be 2-3 mm lower than the surface.

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 polyurethane - polyurea hybrid based systems change depend on ambient and substrate temperatures as well as relative humidity. Under lower temperatures reaction times are longer which increases pot life, coating interval and working time. After polyurethane - polyurea hybrid based system application, the material

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should be protected from direct contact with water for a minimum of 24 hours. Epoxy and polyurethane flooring systems, should be performed by expert contractors and applicators.

Cleaning of Tools

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

Coverage

The consumption of Tardigrade PRGF 900 A + B vary depending on the mixture and mounting adhesive level. Please follow the system guidance.

**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.