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Tardigrade PUWP 395

One Component, Solvent Based, Polyurethane Waterproofing Material

Description of Product

Tardigrade PUWP 395 is a polyurethane based, one component, low viscosity, solvent based, cold applied, moisture curing, flexible and elastic waterproofing material.

Fields of Application

- Water tanks, pipes and channels
- Under-tile applications of wet floors such as bathrooms and kitchens
- Waterproofing and protection of bridges, tunnels and similar concrete structures
- On roofs, terraces and balconies
- In the insulation of indoor and outdoor swimming pools
- Wet areas in the food, chemical and pharmaceutical industries
- In production, storage and assembly areas

Advantages

- It is flexible and elastic. It has crack bridging feature
- It has a very high elongation value
- Low viscosity
- It has high adhesion strength
- Safe to use in drinking water storage and distribution channels
- Easy application
- There is no harm in constant contact with water
- Maintains its elasticity at low temperatures
- It is hygienic and easy to clean
- Provides complete water and moisture insulation

Packaging

Net : 25,00 kg. Gross : 26,00 kg

Net : 5,00 kg. Gross : 5,35 kg

Storage

Store in original sealed containers in dry environment at temperatures between +10°C and +30°C. Do not put excessive loads on top of the products, which would damage the packaging.

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Shelf Life

Shelf life is 9 months from date of production if stored in original unopened containers. Once opened, product should be consumed within same day.

Chemical Structure

Product: Polyurethane Resin

Technical Specifications

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

Tardigrade PUWP 395 Technical Data

Density	1,35 kg/liter (\pm %3)
Viscosity	2.500 - 3.500 mPa.s
Shore A Hardness	7 days: 70 - 80 (ASTM D2240-05)
Bond Strength	7 days: > 2,5 N/mm ² (Concrete) (ASTM D7234)
Solid Matter Ratio	~88 % (\pm %3)
Elongation at Break	7 days : > % 1.000 (ASTM D638)
Touch Dry	4 hours
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.

When the preparation is completed, the surface should be prepared for insulation application by using the appropriate Tardigrade primer material.

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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 +8°C and +30°C. Substrate humidity should be maximum 4%. Substrate temperature 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.

The material at the appropriate temperature is mixed for a short time at low speed and made ready for use.

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 wind and/or rain when the ambient temperature is below +10°C or above +30°C. When necessary, heaters and dryers should be used to measure the ambient humidity and substrate temperature and the workability of the product.

Prepared Tardigrade PUWP 395 can be applied on the surface using a roller or brush. It should be ensured that a non-porous layer covering the surface completely. The second layer should be applied after 12 - 36 hours. If necessary, a third layer can be applied.

Waiting time between layers are at least 10 hours and maximum 48 hours at + 23°C. If it has been waited for 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.

The curing times of polyurethane resin based products change depend on the ambient conditions. The duration of the chemical reaction and the duration of the work also change accordingly. Therefore, these details should be taken into consideration during application. Under low temperatures, reaction times are longer which increases pot life, coating interval and working time.

Tardigrade PUWP 395 is a 1K polyurethane insulation material cured by the humidity of the air. Since the product in the opened package is affected by moisture, it will quickly form a film on the surface. Therefore, opened packaging should be used within 1-2 hours.

After application, the material should be protected from direct contact with water for a minimum of 48 hours.

Epoxy and polyurethane based floor systems should be applied 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

Tardigrade PUWP 395 is used as the main insulation material in insulation systems and its consumption varies according to usage of it in the system. Please refer to the system recommendations for proper consumption quantities.

**Coverage increases as the viscosity gets higher at lower temperature.*

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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.