Tardigrade EPWB 180

Two Component, Water Based, Epoxy Resin Based Primer

Description of Product

Tardigrade EPWB 180, is a low viscosity, water based, two-part epoxy resin based primer.

Fields of Application

- Internal and external substrates
- Non-ventilated areas
- On concrete and cement based mineral surfaces
- Normal to strongly absorbent surfaces
- Primer for all Tardigrade epoxy or polyurethane based systems

Advantages

- Water-based and odorless
- Has vapor permeability and breathing ability
- Low viscosity
- Ultrahigh bond strength
- Solvent free
- Easy application
- Excellent penetration capability

Appearance

Part A (Epoxy Resin)	: Liquid - Transparent
Part B (Epoxy Hardener)	: Liquid - Orange

Packaging

Part A	: 7 kg. net	- Part B	: 13 kg. net
Total Set	: 20 kg. net	- Total Set	: 22,55 kg. gross
Part A	: 1,40 kg. net	- Part B	: 2,60 kg.net
Total Set	: 4 kg. net	- Total Set	: 4,90 kg. gross

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.

Shelf Life

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 EPWB 180 Technical Data

Density	Mixed Resin: 1,08 kg/liter (± %3)
Viscosity	Mixed Resin: 500-1.000 mPa.s
Shore D Hardness	7 days: 75-85 (ASTM D2240-05)
Bond Strength	7 days : > 3 N/mm² (Concrete) (ASTM D7234)
Abrasion Strength	7 days : < 20 mg (CS 10/1000/1000) (ASTM D4060-14)
Duration of Use After Mixing	60-90 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 6%, 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.

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 moisture should be maximum 6%. 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. Prior to mixing, stir part A with a mechanical drill and paddle at a very low speed.

Add component B gradually into component A and mix with a low speed till you reach a homogeneous consistency (Approximately 3 minutes).

If necessary, the mixture is mixed with a low-speed mixer until a homogenous mixture is obtained again by adding 10% of clean water. Water should not be added for the second coat primer application. Only A and B components should be mixed and applied.

In order to prevent possible mixing errors, the final state of the mixture is put in a clean and suitable container and mixed at low speed for a short time and ready for use. Avoid mixing too long and high speed to minimize air drag.

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.
A surface which does not have sufficient waterproofing should not be coated.

After the mixing procedure**,** Tardigrade EPWB 180 can be applied to the surface by using brush or roller. Make sure that a continuous, pore free coat covers the substrate. Apply two coats if necessary. If epoxy or polyurethane based coat will be applied, aggregate (200-500 micron thick) may be added on the primer while it is wet.

Mixed product should be applied in max. 20 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 change depends 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 low temperature conditions, the chemical reaction slow down and the working time between coats is prolonged.

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

Purpose of Use	Product	Consumption
Primer	Tardigrade EPWB 180	0,10 – 0,20 kg/m²

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

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.