

Preparation Date: 30/05/2014

Revision Date: 02/01/2018

Revision No: 1

Page No: 1 / 4

## Tardigrade ECAS 100

Epoxy Based Two Component, Solvent Free, Transparent Topcoat

### Description of Product

Tardigrade ECAS 100, is a solvent-free, two component, low viscosity, self-leveling, antistatic epoxy based transparent top coating.

### Fields of Application

- On concrete and cement based mineral surfaces
- On automotive, pharmaceuticals, chemistry, electrical, electronics and similar markets manufacturing and storage areas,
- In plane hangars and warehouses where flammable and explosive materials are stored,
- In electrical equipment manufacturing facilities, server rooms, automation rooms, factories, surgery rooms and printing houses,

### Advantages

- Low viscosity
- Antistatic properties
- Highly resistant to mechanical loads and chemicals
- Solvent free
- Conductive
- Excellent penetration and adhesion ability
- Hygienic
- Easy application
- Liquid proof
- Semi-gloss surface

### Appearance

Part A - Resin	Liquid – Transparent
Part B - Hardener	Liquid – Pale yellow

### Packaging

Part A	: 13,60 kg. net	- Part B	: 6,40 kg. net
Total Set	: 20 kg. net	- Total Set	: 22,55 kg. gross
Part A	: 2,72 kg. net	- Part B	: 1,28 kg. net
Total Set	: 4 kg. net	- Total Set	: 4,90 kg. gross

*\*Barrels are available if requested.*

Preparation Date: 30/05/2014

Revision Date: 02/01/2018

Revision No: 1

Page No: 2 / 4

### Storage

Store in original sealed containers in a dry, non-frozen 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

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 ECAS 100 Technical Data

Density	Mixed Resin: 1.08 kg/liter ( $\pm$ %3)
Viscosity	Mixed Resin: 300-600 mPa.s
Shore D Hardness	7 days: 75-85 (ASTM D2240-05)
Compressive Strength	28 days: > 95 N/mm <sup>2</sup> (ASTM D695-10)
Flexural Strength	7 days: > 30 N/mm <sup>2</sup> (ASTM D790)
Bond Strength	7 days : > 3 N/mm <sup>2</sup> (Concrete) (ASTM D7234)
Abrasion Strength	7 days < 20 mg (CS 10/1000/1000) (ASTM D4060-14)
Electrostatic Behavior	$10^4 \leq R_g \leq 10^6 \Omega$ (IEC 61340-4-1)
Duration of Use After Mixing	30-50 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. Capillary spaces where in the concrete surface should be filled. 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

Preparation Date: 30/05/2014

Revision Date: 02/01/2018

Revision No: 1

Page No: 3 / 4

and dry vacuum cleaner. Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve a profiled open textured surface.

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 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. 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). In case it would be used as repair mortar, mixture completed with adding the aggregate into the A+B mixture.

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 wind and/or rain when the ambient temperature is below +10°C or above +30°C. When necessary, heaters should be used to increase the ambient temperature and the workability of the product. Should not be applied where there is insufficient waterproofing.

Before application, a reference zone application should be done according to desired conductivity values. The surface primer should not be blunted with sand.

The surface with the conductive primer and applied conductive grounding kit, must be completed by applying an antistatic finish coating. The tardigrade ECAS 100 is spread properly on the surface with antistatic coating system applied. To achieve a smooth surface, velvet rolls should be used in two directions.

Mixed product should be applied in max. 20 minutes in about +23°C. Waiting time between coats should be minimum 10 hours and maximum 48 hours at +23°C. If waited more than 48 hours, the surface should be sanded. The product would be completely cured in minimum 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 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.

Preparation Date: 30/05/2014

Revision Date: 02/01/2018

Revision No: 1

Page No: 4 / 4

In such cases overall coating should be removed from the floor and renewed. The earth return circuit procedure must be approved by the relevant regulations and by an authorized electrician (engineer). At least 2 spot points are required for each room. Each earthing point can ground an area of about 300 m<sup>2</sup>. To maintain the appearance of the floor after application, ECAS 100 must have all spillages removed immediately and must be regularly cleaned using rotary brush, mechanical scrubbers, scrubber dryer, high pressure washer, wash and vacuum techniques etc. using suitable detergents and waxes.

### **Cleaning of Tools**

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

### **Coverage**

Tardigrade ECAS 100 Part A + Part B mixture is used as a primary coating material in coating systems. Consumption varies depending on the usage of it in the system.

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

### **Health and Safety Information**

The following protective measures should be taken when working with the material: Wear safety gloves, goggles and protective clothing. Because of irritation, effects of the uncured material, components should not come in contact with the skin 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**

As being 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.