

# THE LAB<sup>o</sup>

## Chemicals & Coatings

---

### -EPOXY MORTAR-

#### TECHNICAL AND MATERIAL SAFETY DATA SHEET

##### DISCLAIMER AND IMPORTANT SAFETY NOTICE

To the best of our knowledge the technical data contained herein is true and accurate at the date of issuance and is subject to change without prior notice. User must contact THE LAB CC before ordering to ensure the correct products are used for application. No guarantee of accuracy is given nor implied. We guarantee that all THE LAB CC products have undergone quality control procedures to conform to THE LAB CC quality control standards. We assume no responsibility for coverage, performance or injuries resulting from use. Liability, if any, is limited to the replacement of products. Prices and cost data, if shown, are subject to change without prior notice. The factory will NOT be responsible for damage or loss if application is not done by THE LAB CC trained applicators or if THE LAB CC specifications are not adhered to. It is the customers' responsibility to ensure they familiarize themselves with the correct application methods and ask for help from THE LAB CC. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY THE LAB CC, EXPRESSOR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

##### SUPPLIER IDENTIFICATION AND INFORMATION

Manufacturer name  
Address of manufacturing

THE LAB Chemicals & Coatings  
8 Garvin Circle, Strand, 7140

Email

[sales@thelabcc.co.za](mailto:sales@thelabcc.co.za)

---

# THE LAB Epoxy Mortar system

Epoxy Mortar system is a perfect solution to even floorspace with skilled workmanship to a desired state. It's an economical quick setting solution with a high impact strength. Suitable for use in workshops, factories & warehouses, etc, to provide a hard wearing easily cleaned & level finish. Epoxy coat can be applied over the Epoxy Mortar system to enhance the floor to a attractive finish.

## Properties or Features

**Solvent Free:**  
Solvent free, low in VOCs and environmentally friendly.

**Hard-Wearing:**  
Hard-wearing & abrasion resistant suitable for heavy traffic.

**Versatile:**  
Quick to install and can be applied to most substrates.

Detailed application instructions are available upon request.

## Substrate Requirements

Concrete or screed substrate should be a minimum of 25 N/mm<sup>2</sup>, free from laitance, dust and other contamination. The substrate should be dry up to 75% RH as per BS8204 and free from rising damp and ground water pressure. To produce the required aesthetic effect a smooth, level substrate is required.

## Installation Service

The installation should be carried out by a trained contractor with a documented quality assurance scheme.

## Further Information

To ensure you are specifying a fit-for-purpose floor, please consult our Technical Advisors

## Environmental Considerations

The finished system is assessed as non-hazardous to health and the environment. The long service life and seamless surface reduce the need for repairs, maintenance and cleaning. Environmental and health considerations are controlled during manufacture and application of the products by staff and fully trained and experienced contractors.

## Aftercare, Cleaning & Maintenance

Clean regularly using a single or double headed rotary scrubber drier in conjunction with a mildly alkaline detergent.

## Important Note

THE LAB products are guaranteed against defective materials and manufacture and are sold subject to our standard 'Warranty, Terms and Conditions of Sale', copies of which can be obtained on request. Warranty does not cover suitability, fit for purpose or any consequential or related damages.

## Technical Profile\*

\* These figures are typical properties achieved in laboratory tests at 20°C and at 50% Relative Humidity.

### SLIP RESISTANCE\*\*

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry >40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

### THERMAL RESISTANCE

Tolerant up to 50°C

### CHEMICAL RESISTANCE

Contact technical department

### ABRASION RESISTANCE

BS8204:Part 2:2002

Class AR2 – Medium duty industrial and commercial

### COMPRESSIVE STRENGTH

BS 6319

>30 N/mm<sup>2</sup>

### FLEXURAL STRENGTH

BS 6319

10 N/mm<sup>2</sup>

### BOND STRENGTH

Greater than cohesive strength of 25 N/mm<sup>2</sup> concrete. >1.5 MPa

### TOXICITY

Taint free to sensitive foodstuffs

### SPEED OF CURE

	10°C	20°C	30°C
--	------	------	------

Light Traffic	36 h	24 h	16 h
---------------	------	------	------

Full Traffic	72 h	48 h	36 h
--------------	------	------	------

Full Chemical Cure	12 d	7 d	6 d
--------------------	------	-----	-----

Kit 8-12m<sup>2</sup>/ kg (28kg)

Base: 1.36kg Act: 0.640kg

## **GENERAL INFORMATION WORKING WITH COLOUR EPOXY RESIN FLOORS**

When products comprise two or more components, these can be delivered in coordinated packages so that there is no need for the installer to measure or weigh any further. However, it should be ensured that the appropriate unit is assembled.

### **STORAGE**

Each product has its own shelf life, this is the maximum time a product can be stored. This should be checked on the datasheet of each product. For most products this period lies between 6 and 12 months.

However, dual component resins can crystallize when stored incorrectly. Single component resins should always be kept under airtight seal. Products must be stored at a temperature between 10°C and 30°C. The best temperature for storage is 20°C.

### **SUBSTRATE**

The substrate on which the resin will be applied must always be clean, dry, and free of dust and grease, except for those subfloors that specifically state otherwise. A cement-based substrate must be at least 21 days old and no longer have a cement skin on it. According to ASTM-F-1869 (Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Sub floor Using Anhydrous Calcium Chloride), the maximum allowed water/vapour transmission rate is 14.647 Kg/m<sup>2</sup> per 24 hours.

According to European standards, the maximum allowed moisture percentage in the substrate is 3%. Subfloors temperature must be 3 °c above dewpoint. Very simply to detect with a dewpoint indicator .Please respect the processing temperature as shown on the technical datasheet.

Depending on the circumstances and the condition of the substrate, the following methods can be used to ensure the subfloor is in the required condition:

Raising:

- blasting
- sanding with diamond sander
- thermal shock treatment
- water sandblasting
- bush hammering
- cleaning by using a concrete degreaser
- etching with hydrochloric or phosphoric acid
- brushing

Heating:

- with warm air or blow lamps (Do not use waste gas)
- Infrared radiation
- Drying chamber

### **PROCESSING TIME OR POT LIFE**

The pot life (the timeframe within which the material has to be processed) depends on the temperature and the quantity of the mixed material. The higher the temperature and the greater the quantity, the shorter the processing time.

Experience shows that if installers are familiar with the system, processing time suffices amply.

After mixing the A-component with the B-component the reaction starts immediately.

The mix has to be applied immediately.

Once material consisting of 2 components has been mixed, it can no longer be stored. Single component material can be stored when sealed completely airtight (excluding any air within the container too).

## **MIXING**

Mixing the material is one of the most critical stages in the processing, and must be done with extreme care. The contents of the pre-measured pots and bags must be used in their entirety! When contents are not used fully, the mixing ratio will be incorrect and the end product will not be of an optimal quality. If installers decide not to use the pre-measured units, the correct composition of the mixture must be known beforehand.

The only appropriate way of obtaining the right balance between components A and B, is by weighing each using sufficiently accurate scales. After mixing the ingredients, the entire homogeneous mixture has to be transferred into another container and be mixed again. This to include into the mixture any material that was left under the edges and on the bottom of the container, therefore homogenizing the mixture even more. To ensure a homogeneous mixture, mixing must be done thoroughly. A mixture that is not homogeneous will cause uneven hardening, as a result of which the end product will contain hard and soft spots.

### **Caution:**

While mixing paint, casting floors and sealing compounds, one must be careful and has to ensure that no air gets into the mixture; a low-speed electric drill fitted with a mixing paddle is recommended here. Depending on the consistency of the product, mixing can be done by hand or mechanically. Spatulas, palette knives, filling knives and trowels are all suitable mixing tools; a low-speed electric drill fitted with a mixing paddle is ideal for mechanical mixing. A mixing machine can be used for larger quantities.

## **PREPARATION**

Applying a bonding primer is absolutely necessary because that primer seals the porosity of the substrate, ensuring the applied system to remain intact, and also allowing for optimal adhesion. The amount of bonding primer required depends on the "suction" of the substrate. The rougher the texture of the substrate, the greater the amount of primer needed.

Optimal bonding is only achieved if at least 12 hours have passed before the next layer is applied or if the bonding primer is cast with appr. 0.100 kg/ m<sup>2</sup> fire-dried sand with a grain size of 0.1-0.3 mm or 0.3-0.8 mm.

If it is not possible to use any of these methods, the primed surface should be cleaned with a cloth soaked in either Ecosolve or acetone before the next layer is applied.

## **TOOLS**

Resins are often processed with construction tools. All tools should be made of steel, because resins will stick to wood, which makes a proper finish impossible. This is also the reason why it is necessary to clean the steel tools frequently during the entire process. Tools can be cleaned with solvents before the resins have hardened.

Brushes or rollers are often used for liquid resins, such as primers and very thin floor and wall finishes. Because these are difficult to clean after usage, usually disposable elements are utilized.

In choosing materials, it is best to verify whether they withstand solvents.

A brush should not dissolve nor lose hairs while being used.

## **HUMIDITY**

A general rule for virtually each system and product: no liquid during the first 7 days.

## **SAFETY**

Always read the security (or the MSDS) sheet of the various products used.