

**Four Component Polyurethane Cementitious, Self Smooth & Flat Flooring, Topping in a Range of Colors and Having a Matt Finish, Light-medium Duty Floor**

**Thickness Require: 3.00mm for Light-Medium Duty Floor**  
**Coverage Quantity: 3.00mm thick/5.70 kg/m<sup>2</sup>**

**Application**

Modified Polymer Polyurethane Resin with Cementitious & Silica Sand, High performance chemical resistance and mechanical properties. Highly fluid, easy processing, short curing time's properties even at low temperatures (as of 5°C) and high humilities. (high hardness and flexibility values) and color stability.

**Used Area**

Breweries, Commercial Kitchens, Dairy Industries, Food & Drink Industries, Palm Oil Industries, Pharmacy Industries & Housing Commercial Building

**Advantage & Properties**

To provide a light-medium duty, hard wearing with self-smoothing flat floor finish with exceptional chemical resistance. Typical areas for use are wet and dry process areas where the floor is subjected to impact and chemical attack. The specific advantage offered by Polyurethane Topping Mortar Layer. Very good adhesion, the system recommended for concrete.

**Ultraviolet Resistance:**

Not reflection to eye and no yellowing after 100 hours.

- ❖ Adhesion is always good on mineral substrates surfacing.
- ❖ Good in no dust from substrate coatings easy to clean, improved visibility.
- ❖ Excellent of chemical resistance, Good on hygienic floor and wall surfacing.
- ❖ Adhesion promoting primers between old with new concrete.
- ❖ Non-toxic, the coating have been cured applied on health floor.



**Food Industries**



**Drinking Factory**

**Colours**

Mid Grey, Mustard, Red, Cotta Red, Green, Buff & Cream.  
 Other specials colour custom made is available.



Cream



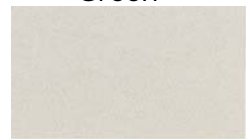
Green



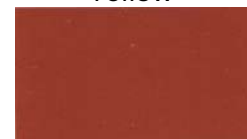
Yellow



Grey



Light Grey



Red

**Build Guard SF 3** is not color stable and may discolor on ageing; this is more noticeable in light color. This will not impair its chemical resistance or durability.



**Dairy Farm Factory**



**Medicine Factory**



**Medicine Packaging Factory**



**Raw Material Food Industrial**

**Preparations**

**New Concrete Floor Slab**, The concrete is requirement of power float finishing having flat & smooth appearance, must cured at least 28 days and having with minimum Compressive Strength of 5,000 psi [35 Mpa]. Those cement slurry, plaster droppings, etc. must be remove, the surface of concrete free of oil, grease, and other loose particles and contaminations.

**Substrate Moisture Barrier, Or Damp Tolerance**

Build Guard SF3, industrial flooring is sensitive tolerant to residual substrate moistures barrier vapor or dampness, is required be installed of special materials as: PU Cementitious Moisture Barrier or Epoxy Mortar directly onto old/existing concrete, or new concrete. This enables rapid construction programs to be maintained and facilitates refurbishment work in wet process areas.

**Mixing:**

- Add Part B and C (Pigment) into mixing pail. Mixing with blender for 30 sec.
- Add Part A mixing with blender for 30 seconds and Part C1 into mixing pail. Allow the contents to mix until aggregate is thoroughly “wet out” for 30 seconds. Mix materials with low speed drill and paddle for approximately 2-5 minutes. Insure a thorough mix. Never mix more material than can be used in thirty (30) minutes. Do not apply PU or Epoxy when ambient or temperatures are below 50 °F

**Method of Application**

- Step 01 Scarification by milling machine or sand-blasted to SS 2 Standard and de-rust to ST 2 Standard 50mm rich primer is recommended for priming, vacuum all dust and clean with water.
- Step 02 Apply layer of **Epo Bond Primer** by roller or spray, and allow drying for 12 hours.
- Step 03 Apply **Build Guard SF3** by comb steel trowel with spike roller and screeds exhibit a very flat finish can be kept in spotless hygienic condition and are of attractive appearance. System thicknesses usually vary from 3.00mm thick, and allow drying for 12 hours.

- OR Step 04 **If Require Special Glossy or Orange Peel Finish**  
Apply layer of **PUR Guard FC** [Glossy Finish System Smooth or Orange Peel Type] by roller or spray, and after 12 hours the finished coat has been cured.

## Physical Properties

	5°C [winter]	10°C [winter]	25°C [Tropical]
Pot Life	<b>25 min</b>	<b>20 min</b>	<b>15 min</b>
Light Traffic	<b>48 hrs</b>	<b>36 hrs</b>	<b>24 hrs</b>
Full Traffic	<b>120 hrs</b>	<b>72 hrs</b>	<b>48 hrs</b>
Fully Cured	<b>42 days</b>	<b>42 days</b>	<b>28 days</b>

### [Temp. Tested at 23 °C]

Compressive Strength	<b>&gt;55N/mm<sup>2</sup></b>		
Flexural Strength	<b>&gt;21N/mm<sup>2</sup></b>		
Tensile Strength	<b>&gt;7N/mm<sup>2</sup></b>		
Dynamic E-Modulus	<b>&gt;14000N/mm<sup>2</sup></b>		
Coeff. Thermal Expansion	<b>&gt; 3.60 x 10<sup>-5</sup> °C<sup>-1</sup></b>		
Thermal Conductivity	<b>0.9W/m °C</b>		
Surfaces Resistivity	<b>2 x 10<sup>11</sup> Ω ohms</b>		
Water Adsorption	<b>0 ml</b>		
Surface Spread of Flame	<b>Class 2</b>		
Abrasion Resistance	<b>1410mg</b>	<b>[Taber H22]</b>	
	<b>120mg</b>	<b>[Taber CS17]</b>	
Bond Strength	<b>Cohesive strength of concrete impact Resistance &gt;0.5mm (BRE Screed tester) Temperature resistance: -5 to + 60°C</b>		

## **Packaging**

**20kg packs**, consisting of Base A, Hardener B, Filler C1 & Pigment C2  
 Part A  
 Part B  
 Part C

## **Coverage Estimate**

If require of thick, 3.00 mm, 5.70 kg/m<sup>2</sup>  
 If require of thick, 3.50 mm, 6.65 kg/m<sup>2</sup>

## **Chemical Resistance**

Excellent resistance to sugars and most acids (organic & inorganic).  
 Consult **LaMaCo Malaysia** for more detailed test data.

### **Performance against more common chemicals :-**

	<b>Excellent</b>	<b>Good</b>	<b>Limited</b>
<b>Hydrochloric Aid 10%</b>	√		
<b>Sulphuric Aid 25%</b>		√	
<b>Citric Acid 10%</b>	√		
<b>Acetic Acid 5%</b>	√		
<b>Lactic Acid 10%</b>	√		
<b>Acetone</b>			√
<b>Methanol</b>			√
<b>Sugar Syrups</b>	√		
<b>Caustic Soda (Conc)</b>	√		
<b>Petrol</b>	√		
<b>Oil</b>	√		
<b>Detergents</b>	√		

**Storage & Shelf Life** Stored unopened in dry conditions at <25°C, shelf life will be 6 months minimum.

**Further Information** Where other products are to be used in conjunction with this material, the relevant technical data sheets should be consulted to determine total requirements.

**LaMaCo Malaysia** has a wealth of technical & practical experience built up over many years in our pursuit of excellence in flooring and concrete technology. Clients are welcome to call our Technical Desk or visit our Technology Centre.



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