

CHEMICAL RESISTANT FLOORING SYSTEM.



Summary of application

STEP 1: Assessment of the surface.

STEP 2: Crack filling of the floor using **Ressi EPO Crack Fill**.

STEP 3: Surface Grinding and preparation.

STEP 4: Application of **Ressi EPO Primer**.

STEP 5: Application of **Ressi EPO Chem Might**.

Detailed Description

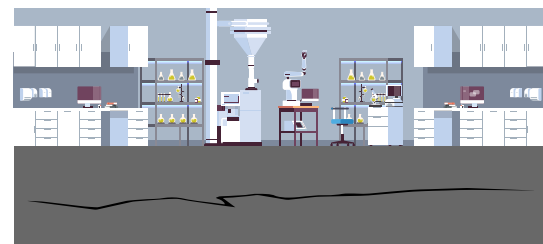
Epoxyes are polymer materials that begin life as liquids and are converted to the solid polymers by a chemical reaction. An epoxy-based polymer is mechanically strong, chemically resistant to degradation of the chemical elements in the solid form & highly adhesive during conversion from liquid to solid. There are a wide range of basic epoxy chemicals from which an epoxy system can be formulated. Epoxyes are known for their excellent adhesion, chemical and heat resistance, good to

excellent mechanical properties & particularly good electrical insulating properties. Almost any property can be modified. Epoxy floorings are surfaces that comprise of multiple layers of epoxy that is applied to a floor of depth varying from 300 microns to 4mm or above. Following is a description for the application of a chemical resistant epoxy floor using **Ressi EPO Chem Might**. This flooring can be applied up to a thickness up to 4mm.

Step 1: Assessment of the surface

It is essential to assess the surface on which the application of an epoxy flooring is suggested. If the surface is not ready to accept the subsequent products, it is recommended to prepare a floor which is appropriate to receive the proper epoxy flooring treatment. Usually for freshly laid concrete, it is recommended to make sure that the concrete is at least 28 days old and has a moisture content which is less than 5%. It is also to be ensured that the concrete is levelled and reasonably smooth.

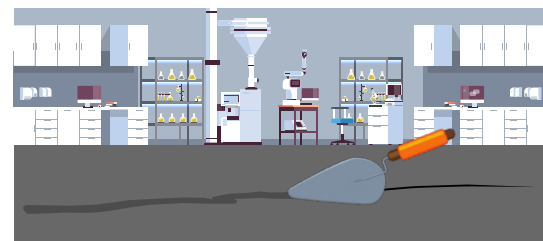
Note: Generally, better the surface, better the finishing of the subsequent layer of finishing epoxy. It is recommended to keep



the floor as levelled & straight as possible, even if there is a slope, it is recommended to make sure that the surface is as straight as possible in a slope.

Step 2: Crack filling of the floor

Once the surface has been laid, & properly prepared, there should not be any cracks over the floor. In case if there are cracks on the floor due to minor shrinkage or some usage of the floor crack filling should be done using **Ressi EPO Crack Fill**. Once the relative cracks have been identified over the floor it is essential to prepare the floor for the subsequent treatments of Flooring Epoxy Crack Fillers. If the hair line cracks are less than 2mm wide, it is recommended to slightly open the cracks using a chisel hammer or any other appropriate tools. Once the cracks have been opened, it is recommended to clean all the loose debris from the floor and cleaning the cracks with a wet brush and some water. Once it has been clean make sure that the floor itself is dry. Cleaning of the surface is essential as poor cleaning may result in the debonding of the crack fillers applied on the surface. It is also essential to make sure that the floor surface is free from any dust, oil, grease, laitance, or any other material which may result in the debonding of the crack filling material. Once the crack has been opened & proper surface has been prepared, the surface is ready to take in the subsequent crack filling of **Ressi EPO Crack Fill**.



Ressi EPO Crack Fill is a three-component epoxy-based crack filler. It contains Base Resin (Part A), Hardener (Part B), and Filler component (Part C). It is essential that the ratios of the resin and Hardeners should always be consistent (1 part Resin and 0.8 Parts Hardener). The filler ratio can be adjusted as per the requirements of the crack filler.

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If the cracks are deep (above 4mm in depth), the filler ratio can be adjusted to make the **Ressi EPO Crack Fill** more flowable so that it can penetrate within the cracks, if the cracks

of the floor are less than 4mm deep, the filler ratio can be adjusted to make a putty like paste of **Ressi EPO Crack Fill** material so that it can easily be applied with a scraper.

Step 3: Surface Grinding & preparation

Surfaces should be free from grease, oil, chemical contamination, dust, laitance, & loose concrete. Appropriate surface preparation equipment such as shot blast, Scarified or grinder must be used to obtain sound substrate. Surfaces which show any traces of oil must be degreased with a chemical degreaser prior to any surface preparation or grit blasting. Uneven concrete should be levelled to produce flat surfaces. New concrete floors must be at least 28 days old prior to application. Moisture content of the concrete or cementitious floors must be less than 5%. Expansion, control & isolation joints should be carried through floors filled with a suitable sealant. Please refer to the application video for epoxy flooring for further guidance.



Step 4: Application of Ressi EPO Primer.

Ressi EPO Primer is an epoxy-based Primer to be used prior to the application of epoxy flooring and coatings over concrete and cementitious surfaces. **Ressi EPO Primer** is an ideal material to be used in conjunction with various epoxy flooring materials. It is used as a priming coat on concrete & cementitious surfaces prior to the application of various epoxy floorings and coatings. Typical areas of applications include car parks, factory floors, food industry, kitchens, aircraft hangers, hospitals, pharmaceutical plants, warehouses etc. It can be used as a clear coat to maintain original color and appearance of substrates which are not exposed to UV rays.

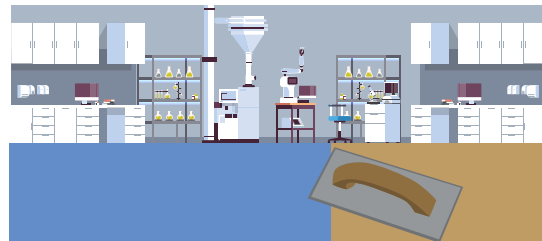
Apply the material with a suitable squeegee, stiff nylon brush, roller or suitable tools working the **Ressi EPO Primer** into the substrate to ensure total absorption into the pinholes and voids. Spray application is also possible. Airless spray will provide faster rate of application.



Prepared surfaces should be primed using **Ressi EPO Primer**. The primer should be brushed into the substrate using a stiff brush or roller & allowed to become tacky (10-20mins) before the application of **Ressi EPO Chem Might**. The primer should be allowed to dry. If the primer has dried, additional coat of the primer should be applied and allowed to become tacky.

Step 5: Application of Ressi EPO Chem Might

Ressi EPO Chem Might is a two-component epoxy resin coating system for concrete and cementitious floor surfaces. It cures to a semi-gloss, impervious finish. The applied thickness of **Ressi EPO Chem Might** is between 300 to 4000 Microns. **Ressi EPO Chem Might** provides a hard tough easily cleanable and attractive floor coating in areas where high resistance to chemical attack is required. It is suitable for use in workshops, car parks, dairies, kitchens, hospitals, laboratories, showrooms, light to medium duty industrial floor coatings, etc.



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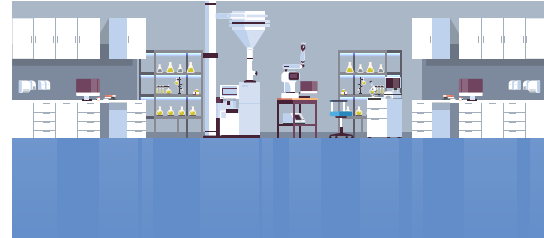


Stir the base and hardener components separately. Once both components are mixed, they should be mixed thoroughly using a slow speed drill attached with paddle for at least 3 minutes (400-600 rpm) until a uniform homogenous mix is achieved. Lay **Ressi EPO Chem Might** over the prepared surface whilst the primer is still tacky. Spread out with a notched trowel to a uniform thickness. Level the material using appropriate trowels and tools to the desired level. Stroke with a steel trowel to achieve a sealed resin rich surface. A Spiked roller can also be used to achieve a uniform surface.

At higher temperatures pot life will be reduced. For working in temperatures below 5°C **Ressi EPO Chem Might** may need to be put in a hot water bath.

Note: Ressi EPO Chem Might has some limitations when it comes to its chemical resistivity. Please refer to the chemical resistivity chart given for further reference.

Chemical	Resistance
Acetic Acid 99%	NR
Acetic Acid 33%	1 day
HBr 47%	Excellent
HCl 12%	Excellent
Nitric Acid 57%	NR
Nitric Acid 19%	Excellent
Sulfuric Acid 98%	NR
Sulfuric Acid 33%	Excellent
ECH 50% in water	NR
DETA 50% in water	1 day
Toluene	Excellent
Petrol	Excellent
Lactic Acid	Good



Ressi EPO Chem Might is not suitable to application on surfaces known to or is likely to suffer from rising dampness or have relative humidity greater than 75%. Should be applied in well ventilated areas. For further information, please refer the reference videos & the product technical datasheet.

Chemical	Resistance
Sodium Hydroxide 50%	Excellent
Water at 70°C	Excellent
Sodium Chloride 30%	Excellent
Methanol	NR
MEK	NR
MIBK	Excellent

Key:

Excellent: < 5% 80-day mass change

Good: 5-10% 80-day mass change

1-day: < 10% 1-day mass change

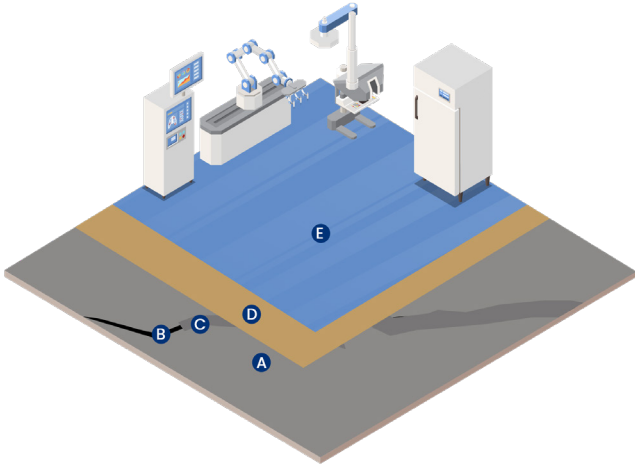
No Resistance: > 10 % 1-day mass change

Consult **Ressichem** technician incase further information is required on the subject.

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System Summary



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- A: Concrete Slab / Screed
- B: Cracks
- C: Ressi EPO Crack Fill
- D: Ressi EPO Primer
- E: Ressi EPO Chem Might

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