Epoxy Flooring System for – Power Plants & Utility Areas

By Ressichem Private Limited

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Why Epoxy Floors at **Power Plants & Utility Areas**

Power plants and utility areas require flooring systems that can withstand **continuous heavy mechanical loading**, **vibration**, and **exposure to oils, fuels, and process chemicals**. These environments demand long-lasting, **mechanically strong, and chemically stable epoxy floors** that ensure safety, durability, and easy maintenance under harsh operational conditions.

The **Epoxy Flooring System for – Power Plants & Utility Areas** is a **heavy-duty, high-build epoxy flooring system** designed to perform in environments where **mechanical stress, thermal variations, and fluid exposure** are routine. Applied at a **minimum thickness of 3000 microns**, this system provides excellent durability, surface integrity, and easy cleanability.

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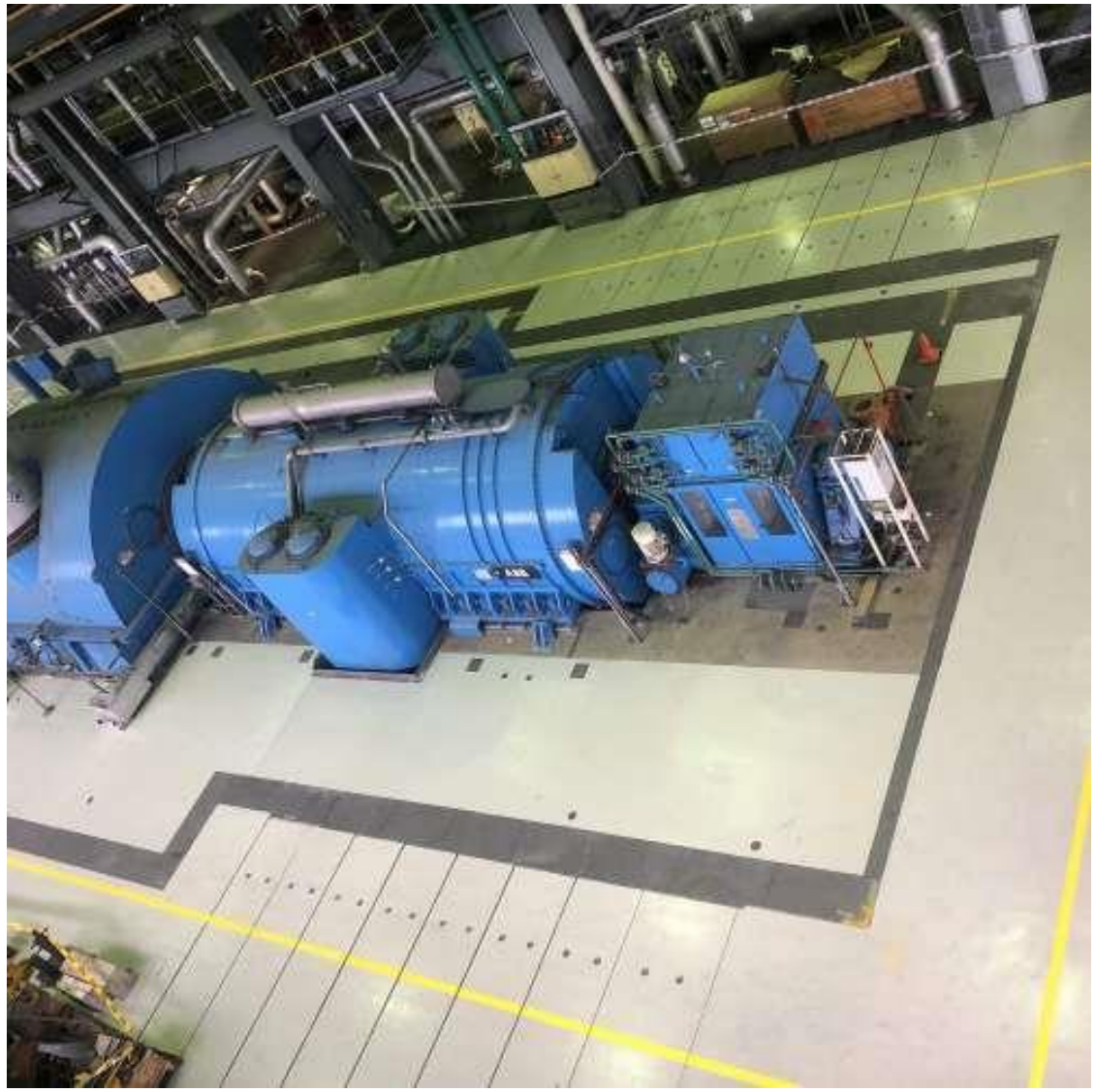
This System is ideal for

- Power generation plants (gas, steam, or hydro)
- Electrical control rooms and turbine halls
- Utility corridors and pump stations
- Generator and transformer rooms
- Maintenance workshops and ancillary service zones



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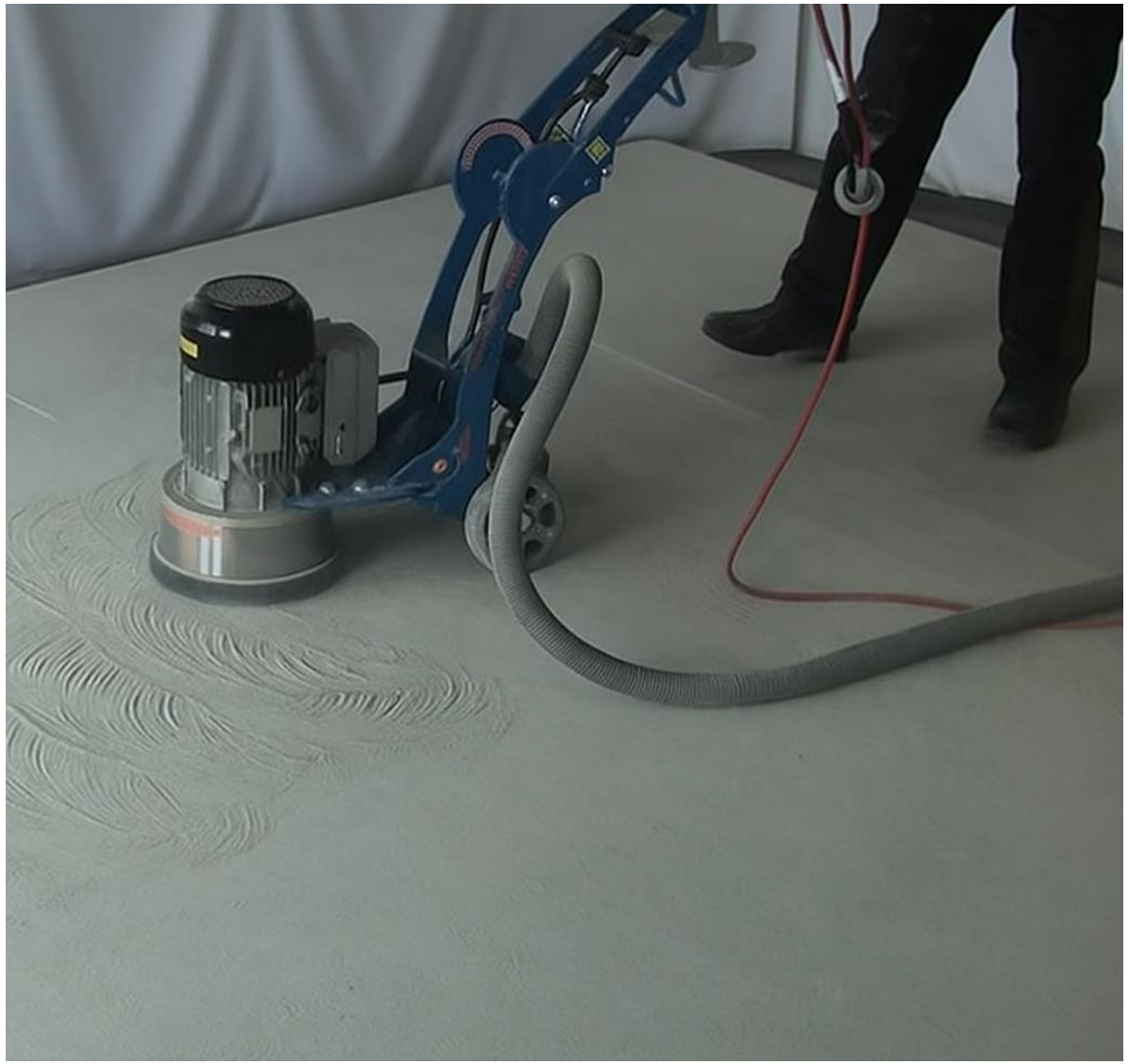
Step 1: Surface Preparation (1 of 2)

All necessary surface repairs, including crack filling or substrate restoration, must be completed prior to the application of any epoxy flooring materials. Ressichem offers a range of suitable crack fillers and repair compounds, including non-shrink cementitious grouts, specifically designed for surface preparation and repair.

Concrete strength evaluation is mandatory and must be defined by the project consultant based on the operational loads and equipment used in the area.

Conduct both **destructive testing (core sampling)** and **non-destructive evaluation (Schmidt Hammer Test)** to confirm substrate adequacy.

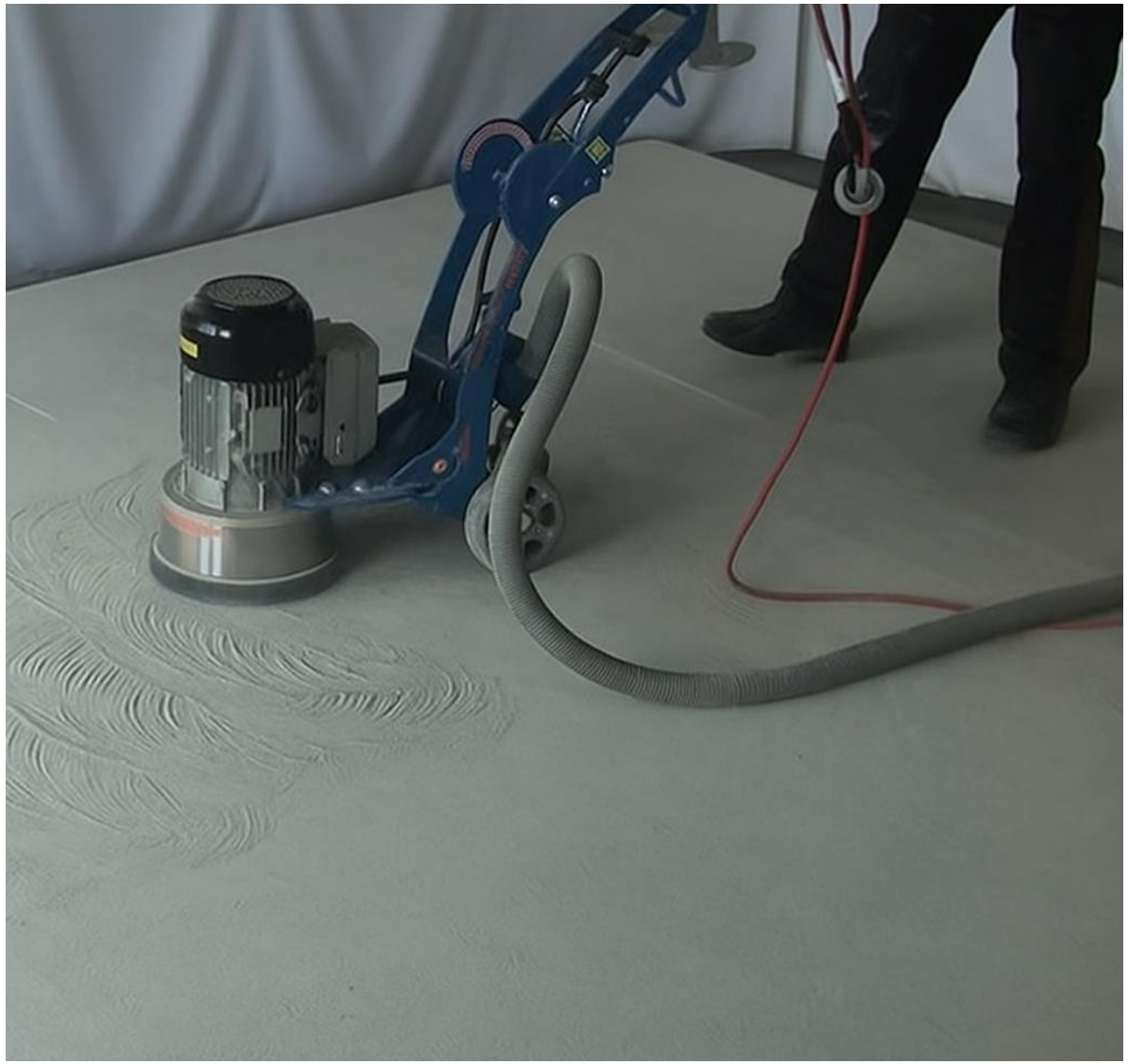
For **major repairs (≥12 mm thickness)**, use **Ressi NSG 710**, a **high-strength, non-shrink cementitious repair grout** capable of achieving compressive strength up to 10,000 PSI.



Step 1: Surface Preparation (2 of 2)

For **minor surface voids or imperfections**, prepare a repair blend of **Ressi EPO Primer LV** and **Ressichem's washed, graded, and completely dried (zero moisture content) silica sand** to restore surface uniformity.

Mechanically prepare the substrate using **shot blasting or diamond grinding**, ensuring the surface is clean, dust-free, and completely free from contaminants such as oil or grease. This step is particularly critical for **older floors that have experienced oil staining or grease penetration**, as such contamination can severely affect adhesion. Deep cleaning and degreasing treatments must be performed prior to coating application.



Step 2: Application of Ressi EPO Primer LV

Apply **Ressi EPO Primer LV**, a **low-viscosity, solvent-free epoxy primer** that ensures strong adhesion between concrete and the epoxy build-up layers.

- Mix resin and hardener components as specified in the product datasheet.
- Apply using a **trowel or epoxy squeegee** to achieve uniform wet film coverage.
- Allow complete curing before proceeding to subsequent layers.

Step 3: Application of Ressi EPO Mid Coat S – GP

Apply **Ressi EPO Mid Coat S – GP**, a **mandatory high-build structural layer** designed for heavy mechanical and impact loads.

- Apply using a **notched trowel or epoxy squeegee** for a dense, even build.
- Recommended **minimum thickness: 1000 microns**, with **2000 microns preferred** for improved impact and load distribution.
- This layer enhances substrate strength and provides a smooth, level base for the topcoat.
- Allow curing as per the datasheet before applying the finishing layer.

Step 4: Application of Final Epoxy Topcoat

Apply **Ressi EPO Floor Plus** or **Ressi EPO Floor Plus Econo**, depending on project specifications:

- **Ressi EPO Floor Plus:** Ideal for customized color finishes where aesthetics and visibility are key.
- **Ressi EPO Floor Plus Econo:** Standard grey variant offering identical mechanical and chemical performance at a lower cost.
- Apply with a **trowel or epoxy squeegee** at a **minimum thickness of 2000 microns**.
- Allow **48–72 hours** before light usage and **7 days** for full chemical and mechanical cure.

Step 5: Floor Markings *(If required)*

If required, apply **Ressi EPO Gloss Might** or **Ressi EPO Roll Coat** for designated lanes or safety markings.

- Use a **roller** after the main epoxy flooring system has fully cured.
- Contrasting colors improve visibility and organization in high-traffic utility areas.

Note:

- The **total system thickness must be a minimum of 3000 microns** to meet heavy-duty performance requirements.
- Always refer to **Ressichem Technical Datasheets** for specific product handling, curing, and environmental guidelines.

System Summary Table

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Parameter	Description
System Name	Epoxy Flooring System for – Power Plants & Utility Areas
Area Type	Heavy-Duty Power Generation and Utility Environments
Traffic Exposure	Heavy Equipment, Vibration, Fluid Exposure
Primary Requirements	Strength, Chemical Resistance, Thermal Stability
Primer	Ressi EPO Primer LV
Mid Coat (Compulsory)	Ressi EPO Mid Coat S – GP (1000–2000 microns)
Topcoat	Ressi EPO Floor Plus / Ressi EPO Floor Plus Econo (2000 microns)
Marking Coat (Optional)	Ressi EPO Gloss Might / Ressi EPO Roll Coat
Silica Used	Washed, graded, and completely dried (zero moisture content) silica sand
Total System Thickness	Minimum 3000 Microns
Application Method	High-Build Trowel or Epoxy Squeegee (Roller Only for Markings)
Finish Type	Smooth, Semi-Gloss
Curing Time Before Use	48–72 Hours (Light Use) / 7 Days (Full Cure)
Key Benefits	Load Endurance, Chemical Resistance, Thermal Stability, Long Service Life

System Summary Diagram

A) Cementitious Surface: (Concrete slab or screed)

B) Cracks and surface damage

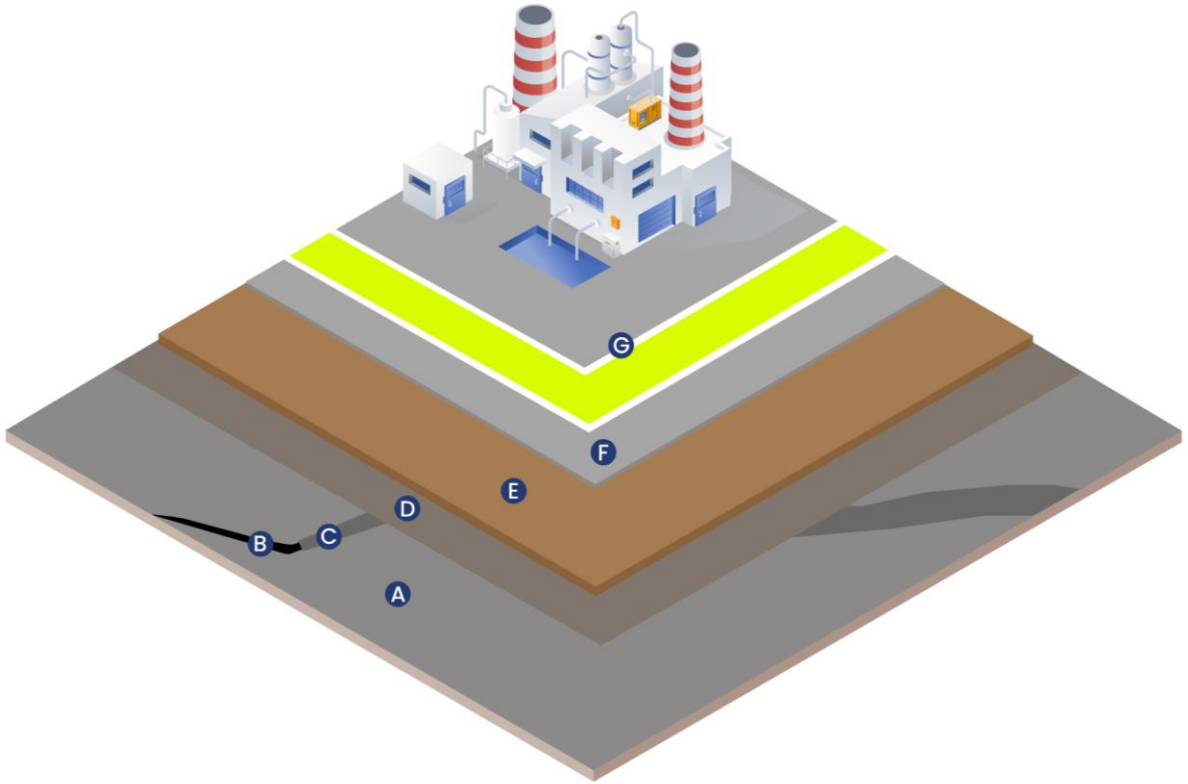
C) Crack Filler and Repairing Materials

D) Ressi EPO Primer LV

E) Ressi EPO Mid Coat S – GP

F) Ressi EPO Floor Plus / Ressi EPO Floor Plus Econo

G) Ressi EPO Gloss Might / Ressi EPO Roll Coat (Marking)



Thank You

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