EPOXY FLOORING SYSTEM FOR – INDUSTRIAL WARE-HOUSES WITH HEAVY FORK-LIFT TRAFFIC

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Introduction

Industrial warehouses endure **high mechanical stress**, especially from **continuous forklift operations, pallet trucks, and heavy storage systems.** The flooring in such environments must be engineered to resist **abrasion, impact, and surface wear** while maintaining long-term performance under heavy loading cycles.
The **Epoxy Flooring System for – Industrial Warehouses with Heavy Forklift Traffic** is a high-build, heavy-duty flooring system developed to provide **superior mechanical durability, seamless finish, and ease of maintenance.** It ensures smooth vehicle movement and long-lasting performance under continuous industrial usage.

Recommended Use Cases

- Industrial warehouses and storage depots
- Logistic centers and freight terminals
- Forklift and pallet movement zones
- Equipment repair and dispatch bays
- Industrial production floors with vehicular loading

Step-Wise System Description

Step 1: Surface Preparation

Proper surface preparation is essential for a long-lasting epoxy flooring system, particularly under heavy traffic conditions.
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.
- The **concrete strength requirement** should be defined by the consultant in line with operational loading.
- Assess substrate quality using both **destructive (core sampling)** and **non-destructive (Schmidt Hammer)** testing methods.
- For **major repairs (≥12 mm)**, use **Ressi NSG 710, a high-strength, non-shrink cementitious repair mortar.**
- For **minor voids or surface imperfections,** prepare a blend of **Ressi EPO Primer LV** with **Ressichem's washed, graded, and completely dried (zero-moisture) silica sand** to create a dense epoxy-sand repair mortar.
- Mechanically prepare the surface by **shot blasting or diamond grinding,** ensuring it is **clean, dust-free, and free of oil or grease contaminants.**
- This step is **especially critical for older floors** that have experienced oil **staining or grease penetration;** thorough degreasing and cleaning must be conducted before application.

Step 2: Application of Ressi EPO Primer LV

Apply **Ressi EPO Primer LV,** , a low-viscosity, solvent-free epoxy primer offering excellent adhesion and deep substrate penetration.
- Mix resin and hardener precisely according to the product datasheet.
- Apply using a trowel or epoxy squeegee for uniform coverage.
- Allow full curing before proceeding to the next step.

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

Apply **Ressi EPO Mid Coat S – GP**, a **high-build, general-purpose epoxy mid-layer** formulated to enhance mechanical strength and system thickness.
- Apply with a **notched trowel or epoxy squeegee** to achieve even distribution.
- Minimum recommended thickness is **1000 microns**, with **2000 microns preferred** for heavy forklift areas.
- Allow full curing before the application of the topcoat.

Step 4: Application of Final Epoxy Topcoat

Apply **Ressi EPO Floor Plus**, a high-build, **wear-resistant epoxy topcoat** designed to withstand continuous forklift movement and industrial wear.
- For applications requiring color customization and higher aesthetic value, use **Ressi EPO Floor Plus.**
- For economical projects where color variety is not required, use **Ressi EPO Floor Plus Econo** in standard grey.
- Both versions deliver identical performance; only color customization differs.
- Apply at a **minimum thickness of 2000 microns using a trowel or epoxy squeegee.**
- Allow **48–72 hours** for light movement and **7 days** for full mechanical cure.

Step 5: Floor Markings (If Required)

Floor markings and demarcation lines can be created using **Ressi EPO Gloss Might** in contrasting colors.
- Apply with a **roller** after full system cure.
- For more economical marking solutions, **Ressi EPO Roll Coat** can be used in alternate colors.

Note:
- The total system thickness must be a minimum of **3000 microns.**
- Always refer to **Ressichem Technical Datasheets (TDS)** for product-specific details, mixing ratios, and curing instructions.

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System Advantages

- **High Mechanical Strength:** Handles constant forklift and pallet jack traffic.
- **Abrasion Resistance:** Maintains gloss and surface integrity under continuous wear.
- **Seamless Finish:** Enables smooth vehicular movement and easy cleaning.
- **Chemical Resistance:** Withstands mild oils, lubricants, and cleaning agents.
- **Low Maintenance:** Simple to clean and re-coat when required.
- **Durable & Cost-Efficient:** Long service life with reduced downtime for repairs.

Maintenance Guidelines

- Clean regularly with neutral pH detergents.
- Immediately remove oil, grease, or solvent spills to prevent staining.
- Inspect periodically for wear in high-traffic paths.
- **Periodic maintenance should include re-coating of the flooring system whenever required** to maintain protection and appearance.
- Avoid dragging sharp-edged materials across the floor to prevent gouging.

System Summary Table

Parameter	Description
System Name	Epoxy Flooring System for – Industrial Warehouses with Heavy Forklift Traffic
Area Type	Heavy-Duty Industrial Warehouses
Traffic Exposure	Continuous Forklift and Pallet Jack Operations
Primary Requirements	High Mechanical Strength, Abrasion Resistance, Durability
Primer	Ressi EPO Primer LV
Mid Coat (Compulsory)	Ressi EPO Mid Coat S – GP (1000–2000 microns)
Topcoat (Mandatory)	Ressi EPO Floor Plus / 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, Gloss, High-Wear Resistant
Curing Time Before Use	48–72 Hours (Light Use) / 7 Days (Full Cure)
Key Benefits	Mechanical Endurance, Abrasion Resistance, Long-Term Durability

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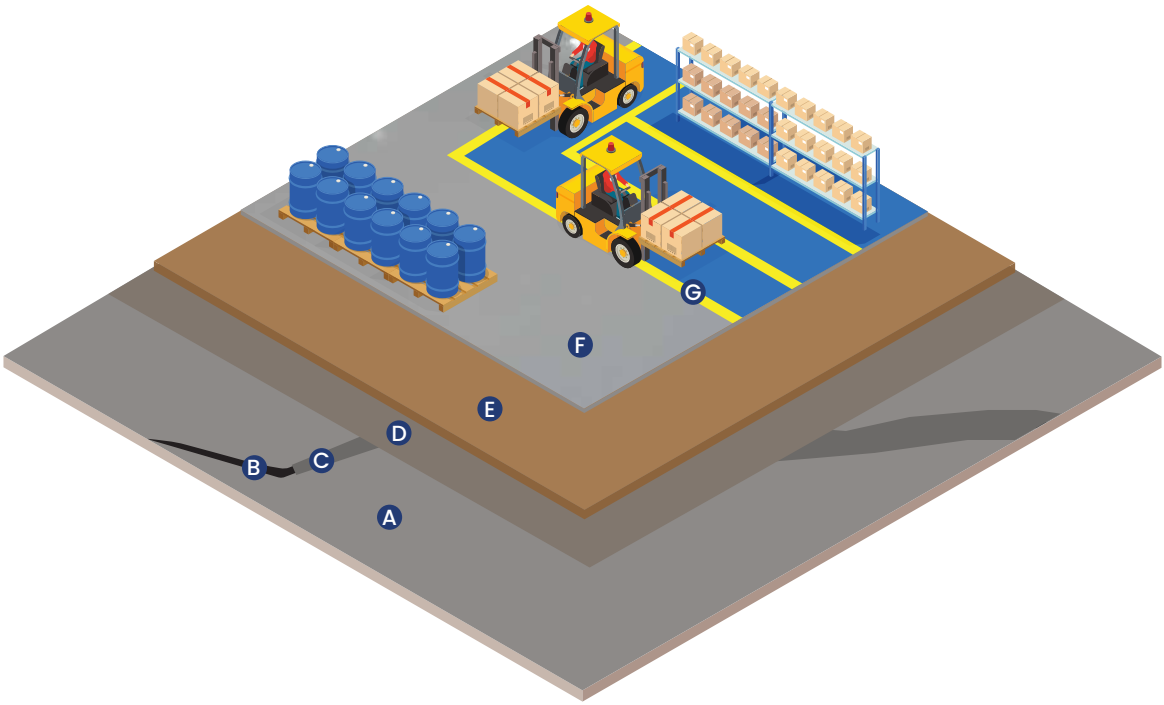
Conclusion

The **Epoxy Flooring System for – Industrial Warehouses with Heavy Forklift Traffic** offers a **robust and reliable flooring solution** for demanding warehouse environments.
The system sequence — **Surface Preparation, Ressi EPO Primer LV, Ressi EPO Mid Coat S – GP, Ressi EPO Floor Plus (or Floor Plus Econo), (Optional) Ressi EPO Gloss Might** — ensures **long-term durability, wear resistance, and seamless functionality** under heavy mechanical loads.

System Summary



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 If needed)

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