

EPOXY FLOORING SYSTEM FOR – BREWERIES, BEVERAGE & DAIRY INDUSTRIES



Introduction

Floors in food and beverage production areas face extreme service conditions. Continuous exposure to acids, alkalis, cleaning agents, and moisture, coupled with mechanical stress from forklifts, conveyors, and heavy machinery, requires a flooring system that is chemically resistant, hygienic, and highly durable.

The Epoxy Flooring System for – Breweries, Beverage & Dairy Industries offers a high-build, heavy-duty, and chemical-resistant flooring solution designed for liquid-handling and hygienic environments. The system provides long-term protection, easy maintenance, and excellent chemical stability, ensuring reliability in food-grade production zones.

Recommended Use Cases

- Breweries and bottling lines
- Beverage and juice manufacturing plants
- Dairy processing and packaging areas
- Food-grade storage, mixing, and filling halls
- Washdown and sterilization zones

Step-Wise System Description

Step 1: Surface Preparation

Proper substrate evaluation and preparation are essential to system performance and longevity.

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 verification must be defined by the project consultant according to anticipated mechanical load.
- Assess surface condition using both destructive (core sampling) and non-destructive (Schmidt Hammer) testing.
- For major repairs (≥ 12 mm), use Ressi NSG 710, a high-strength, non-shrink cementitious grout.
- For minor surface imperfections, use a mix of Ressi EPO Primer LV and Ressichem's washed, graded, and completely dried (zero moisture content) silica sand to fill voids and ensure uniformity.
- Mechanically prepare the substrate via shot blasting or diamond grinding, ensuring the surface is clean, dust-free, and free of oil or grease.
- This step is especially critical for older floors where oil stains or grease penetration have occurred; proper degreasing and cleaning must be performed before coating.

Step 2: Application of Ressi EPO Primer LV

Apply Ressi EPO Primer LV, a low-viscosity, solvent-free primer formulated for deep penetration and strong adhesion.

- Mix resin and hardener components as per product datasheet.
- Apply uniformly using a trowel or epoxy squeegee.
- Allow complete curing before the next application.

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

Apply Ressi EPO Mid Coat S – CR, a chemical-resistant, high-build mid-layer engineered to enhance structural strength and resistance to aggressive cleaning and process chemicals.

- Apply using a notched trowel or epoxy squeegee.
- Recommended minimum thickness: 1000 microns, with 2000 microns preferred for maximum performance.
- Allow full curing before proceeding.

Step 4: Application of Final Epoxy Topcoat – Ressi EPO Chem Plus

Apply Ressi EPO Chem Plus, a mandatory, chemical-resistant epoxy topcoat designed for continuous exposure to acids, alkalis, and sanitizing solutions in food processing areas.

- Apply with a trowel or epoxy squeegee at a minimum thickness of 1000 microns.
- Ensure uniform spreading for a smooth, seamless, and easily cleanable finish.
- Allow 48–72 hours before light movement and 7 days for full cure.

Step 5: Floor Markings (If Required)

Where markings or safety zones are needed, apply Ressi EPO Chem Might in contrasting colors.

- Apply with a roller after full system cure.
- Use for safety demarcations, drainage lines, or operational zone separations.

Note:

- The total system thickness must be a minimum of 3000 microns.
- Always refer to Ressichem Technical Datasheets (TDS) for specific product and curing guidelines.

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System Advantages

- **High Mechanical Strength:** Withstands forklift and conveyor traffic.
- **Chemical Resistance:** Resists acids, alkalis, and sanitizing chemicals.
- **Hygienic & Seamless:** Prevents microbial growth and simplifies cleaning.
- **Repair Compatible:** Can be locally repaired using epoxy or cementitious systems.
- **Long Service Life:** Durable under continuous wet processing conditions.
- **Food-Grade Safe:** Suitable for areas involving food and beverage contact.

Maintenance Guidelines

- Clean regularly using neutral pH detergents or mild cleaning agents.
- Promptly remove any chemical or liquid spills.
- Inspect for abrasion or wear in high-traffic areas.
- **Periodic maintenance should include re-coating of the flooring system whenever required to maintain protection, thickness, and appearance.**
- Ensure proper drainage and prevent prolonged pooling of liquids.

System Summary Table

Parameter	Description
System Name	Epoxy Flooring System for – Breweries, Beverage & Dairy Industries
Area Type	Heavy-Duty Food & Beverage Processing Areas
Traffic Exposure	Heavy Equipment, Forklifts, Liquid Handling
Primary Requirements	Chemical Resistance, Hygiene, Durability
Primer	Ressi EPO Primer LV
Mid Coat (Compulsory)	Ressi EPO Mid Coat S – CR (1000–2000 microns)
Topcoat (Mandatory)	Ressi EPO Chem Plus (1000 microns)
Marking Coat (Optional)	Ressi EPO Chem Might (Contrasting Colors)
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, Chemical-Resistant
Curing Time Before Use	48–72 Hours (Light Use) / 7 Days (Full Cure)
Key Benefits	Food-Safe Finish, Chemical Resistance, Easy Maintenance, Long Service Life

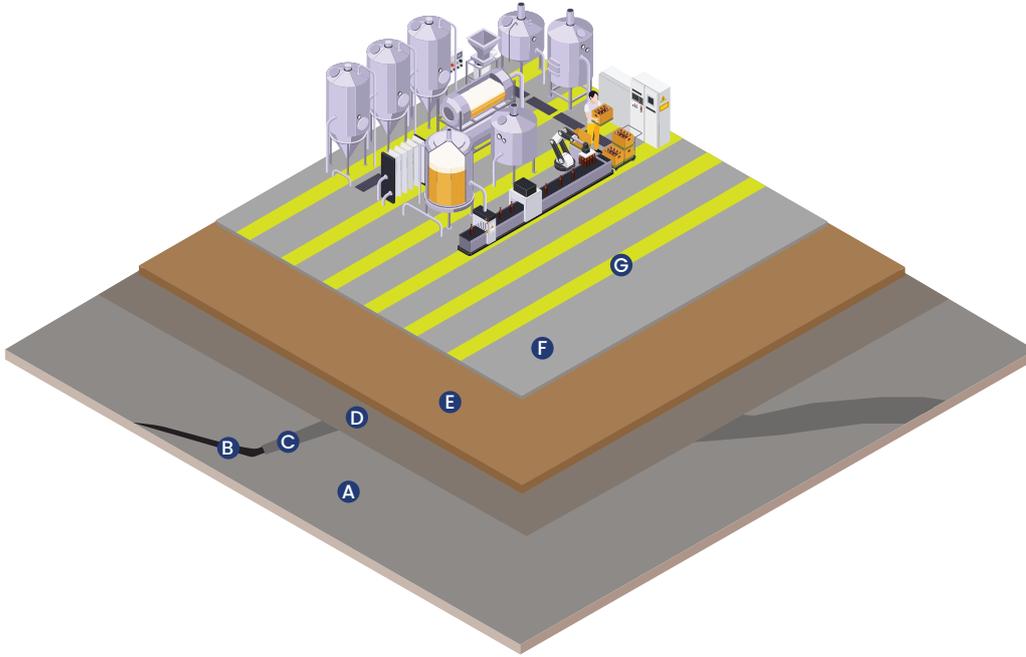
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Conclusion

The Epoxy Flooring System for – Breweries, Beverage & Dairy Industries is a robust, chemical-resistant, and hygienic flooring solution for demanding food and beverage applications.

The system sequence — Surface Preparation, Ressi EPO Primer LV, Ressi EPO Mid Coat S – CR, Ressi EPO Chem Plus, Ressi EPO Chem Might (Marking) — ensures durability, chemical stability, and a seamless finish for long-term operational reliability.

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 – CR
- F) Ressi EPO Chem Plus
- G) Ressi EPO Chem Might (Marking)