RESSI EPO MID COAT F - CR

Chemical Resistant Fine aggregate based Mid Coat

RESSICHEM®
adding life and value to your property

Ressi EPO Mid Coat F – CR is a solvent-free, fine-aggregate-based epoxy mid coat made from Bisphenol-A resins and a cycloaliphatic amine, excluding Nonyl phenol. It is designed for applications ranging from 500 microns to 2mm. **Ressi EPO Mid Coat F – CR** is a solvent-free product suitable for various substrates including metal, wood, fiberglass, and selected plastics. **Ressi EPO Mid Coat F – CR** is also suitable for a variety of substrates such as wood, metal, fiberglass and selected plastics.

ADVANTAGES

- **Chemical Resistance**: Provides excellent resistance to a wide range of chemicals, ensuring durability and longevity in harsh environments.
- **Versatility**: Suitable for application on various substrates such as metal, wood, fiberglass, and selected plastics, making it a versatile choice for different projects.
- **Solvent-Free**: The solvent-free nature of the product ensures a safer application process and reduces environmental impact.
- **High Build**: Capable of applications ranging from 500 microns to 2mm, allowing for thick coatings that provide robust protection and coverage.
- **Nonyl Phenol Exclusion**: Manufactured without Nonyl phenol, aligning with health and safety regulations and reducing potential hazards.
- **Durability**: The use of Bisphenol-A resins and aliphatic amine contributes to the product's strength and adhesion, resulting in a long-lasting protective coat.

AREAS OF APPLICATION

- **Industrial Manufacturing Plants:** Ideal for flooring subjected to heavy equipment, forklifts, and frequent mechanical impacts.
- **Warehouses and Distribution Centers:** : Provides a robust, wear-resistant mi coat surface for high-traffic areas.
- **Automotive Workshops and Garages:** Resistant to oils, fuels, and chemicals typically found in automotive service environments.
- **Food and Beverage Facilities:** Suitable for areas requiring hygienic, durable, and seamless floors.
- **Chemical Processing Units:** Performs well in spaces exposed to mild chemical spills and corrosive agents.
- **Pharmaceutical Plants:** Ensures a smooth, non-dusting surface, reducing contamination risks.
- **Power Plants and Utility Areas:** Protects surfaces from mechanical and thermal stresses.

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- **Public Spaces and Parking Garages:** Offers high durability for areas exposed to heavy vehicular traffic and pedestrian footfall.
- **Cold Storage Areas:** Performs well in environments with temperature fluctuations and low ambient temperatures.
- **Educational and Commercial Buildings:** Provides durable, easy-to-maintain surfaces in hallways, lobbies, and utility areas.

SURFACE PREPARATION

Ressi EPO Mid Coat F – CR should be applied using a recommended primer from the Ressichem Range. Priming instructions should be followed from the technical datasheet of the prescribed material. Below is a generic guideline for surface preparation and priming of the substrate prior to the application of recommended prier and subsequent application of **Ressi EPO Mid Coat F – CR**.

Surfaces should be free from grease, oil chemical, dust, laitance, loose concrete and should have minimum amounts of moisture. Appropriate surface preparation equipment such as shot blast, Scarified or grinder must be used to obtain a sound surface. Substrates which show any traces of oil must be degreased with a chemical degreaser prior to any surface preparation or grit blasting. Cracks, pinholes, potholes should be repaired using **Ressi EPO Crack Fill** or a suitable crack filler recommended by Ressichem. Uneven concrete should be levelled to produce flat surfaces as much as possible. New concrete floors should be atleast 28 Days old prior to application and must not have moisture exceeding 4% using a standard moisture meter. Expansion, control and isolation joints should be carried through floors filled with suitable joint treatment. The concrete surface needs to be primed using an appropriate epoxy primer from the Ressichem Epoxy primer range.

Cleaning: All surfaces must be clean, dry, and free from contaminants such as dirt, oil, grease, and old coatings. Use suitable cleaning agents and methods like solvent wiping, abrasive blasting, or high-pressure washing to ensure thorough cleaning.

Degreasing: For surfaces contaminated with oil or grease, de-grease with an appropriate solvent and allow to dry completely before proceeding.

Abrasion: Mechanical abrasion is recommended to achieve a roughened profile, improving the adhesion of the mid coat. Use abrasive blasting or sanding techniques to achieve the desired surface texture.

Dust Removal: Remove all dust and loose particles created from abrasion using a clean brush, vacuum, or compressed air to ensure a clean surface.

Primer Selection: Choose a suitable primer from the Ressichem Range based on the specific substrate and application requirements. Refer to the technical datasheet of the selected primer for detailed guidance.

Application: Apply the primer in accordance with the manufacturer's instructions. This typically involves mixing components as specified, using appropriate application tools such as brushes, rollers, or spray equipment, and ensuring an even and consistent coat over the entire surface.

Curing Time: Allow the primer to cure as per the recommended time before applying **Ressi EPO Mid Coat F – CR.** Ensure that the primer has adequately cured to provide a solid base for the mid coat application.

Inspection: Inspect the primed surface to confirm that it is free from defects, contaminants, or irregularities that could affect the performance of the mid coat. Address any issues before proceeding with the mid coat application.

MIXING INSTRUCTIONS

Ressi EPO Mid Coat F – CR consists of three components: **Part A (Base), Part B (Hardener),** and **Part C (Filler)**. To ensure optimal performance and proper application, follow these instructions carefully:

Preparation: Ensure all components (Parts A, B, and C) are stored at the recommended temperature (15°C–35°C) before mixing. Verify that the packaging of all components is intact and free from contamination. Use clean, dry tools and containers for mixing to prevent any impurities.

Component Ratios: Refer to the product label or technical table and packaging of this data sheet for the exact mixing ratios of Parts A, B, and C. Accurate measurement is critical to ensure proper curing and performance. Use a calibrated scale for precise weight measurements.

Mixing Procedure:

Pre-Stir Base (Part A): Using a low-speed mechanical mixer (300–500 RPM), stir Part A (Base) for 1–2 minutes until it becomes homogeneous.

Add Hardener (Part B): Gradually add Part B (Hardener) to Part A while continuously mixing. Mix the two components for 2–3 minutes until thoroughly blended. Scrape the sides and bottom of the container periodically to ensure no unmixed material remains.

Incorporate Filler (Part C): Slowly add Part C (Filler) into the mixed Parts A and B in small increments while mixing continuously. This prevents clumping and ensures uniform dispersion. Mix for an additional 2–4 minutes, ensuring a smooth and consistent mixture.

Avoiding Air Entrapment: Use a low-speed mechanical mixer to minimize air bubbles. Do not overmix, as this can introduce excessive air and compromise the final performance.

Induction Time: Allow the fully mixed product to rest for the specified induction time (if required) as mentioned on the datasheet. This ensures proper chemical activation before application.

Pot Life: Use the mixed material within its pot life. Note that the pot life is influenced by ambient temperature—higher temperatures shorten the pot life, while lower temperatures extend it. Discard any material that exceeds the pot life, as it may not cure properly.

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APPLICATION

Once mixed, apply the product immediately using appropriate tools such as trowels, rollers, or spray equipment. Ensure even application according to the recommended thickness (500 microns to 2 mm) for optimal performance. For applications requiring more than one layer, allow each layer to cure for the specified time before applying the next. Lightly sand between layers to enhance adhesion if necessary.

LIMITATION

At higher temperatures pot life will be reduced. For working on Low temperatures below 10°C, **Ressi EPO Mid Coat F – GP** may be placed over a hot water bath. The service temperature for the application of **Ressi EPO Mid Coat F – GP** is between 15°C and 35°C.

PACK SIZE

Ressi EPO Mid Coat F-GP is available in the following packaging.

2.8 KG :	Part A 1 KG Part B 400g Part C 1.4 KG
14 KG :	Part A 5 KG Part B 2 KG Part C 7 KG
28 KG :	Part A 10 KG Part B 4 KG Part C 14 KG
56 KG :	Part A 20 KG Part B 08 KG Part C 28 KG

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TECHNICAL TABLE

Property	Test Method	Result
Component	-	Three : Part A: Base Part B: Hardener Part C: Filler
Mixed form	-	Viscous liquid
Mix ratio (Part A : Part B : Part C)	Theoretical	100 : 40 : 140
Mix Density	ASTM D 1475	1.61 ± 0.05 g /cc
Pot life (300g mix) @ 25°C	-	40 – 60 minutes
Drying time	-	5 – 6 hours
Recoat time	-	10 – 24 hours (Depending upon nature of substrate)
Full Cure	-	7 Days
Coverage per kg material @ 2 mm thickness	-	3 – 4 SFT
Flexural Strength (MPa)	ASTM D 790	44.5 @ 7 Days
Compressive Strength (MPa)	ASTM D 695	76.4 @ 7 Days

***Note: At 40°C pot life will half so application should be planned accordingly.**
Typical Results under Laboratory Conditions

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MID COAT F - CR
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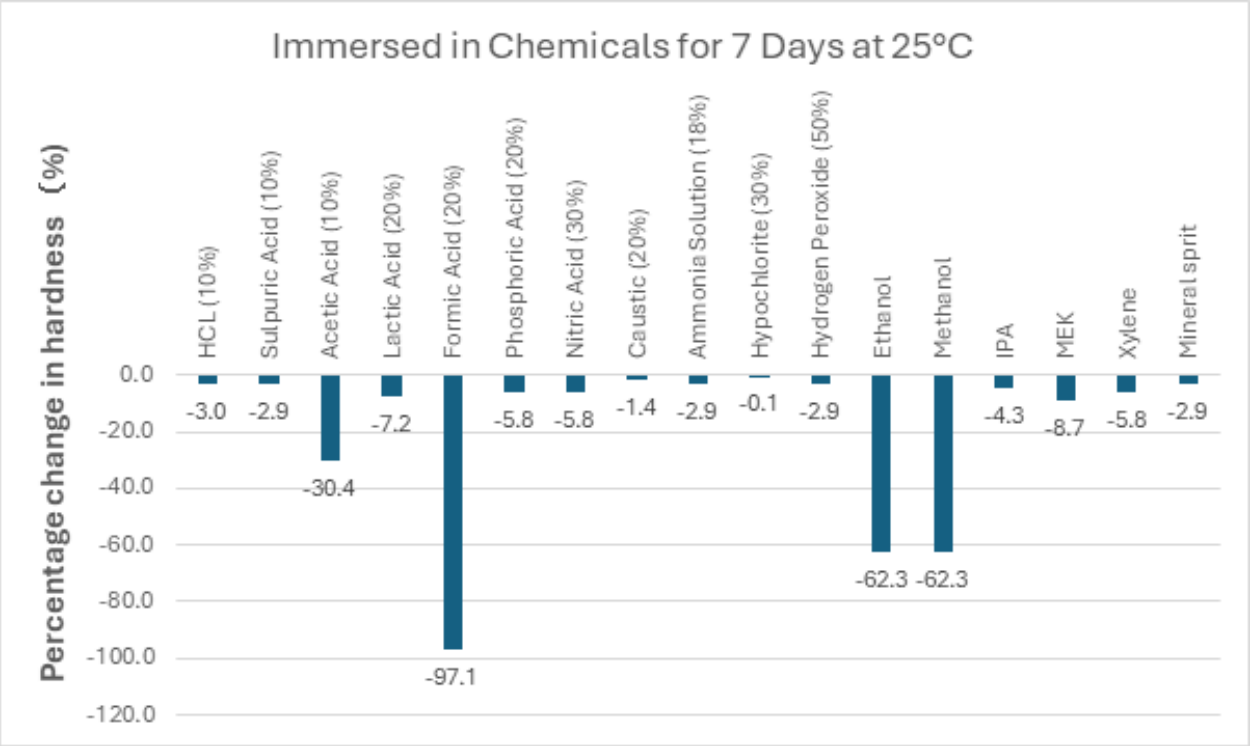
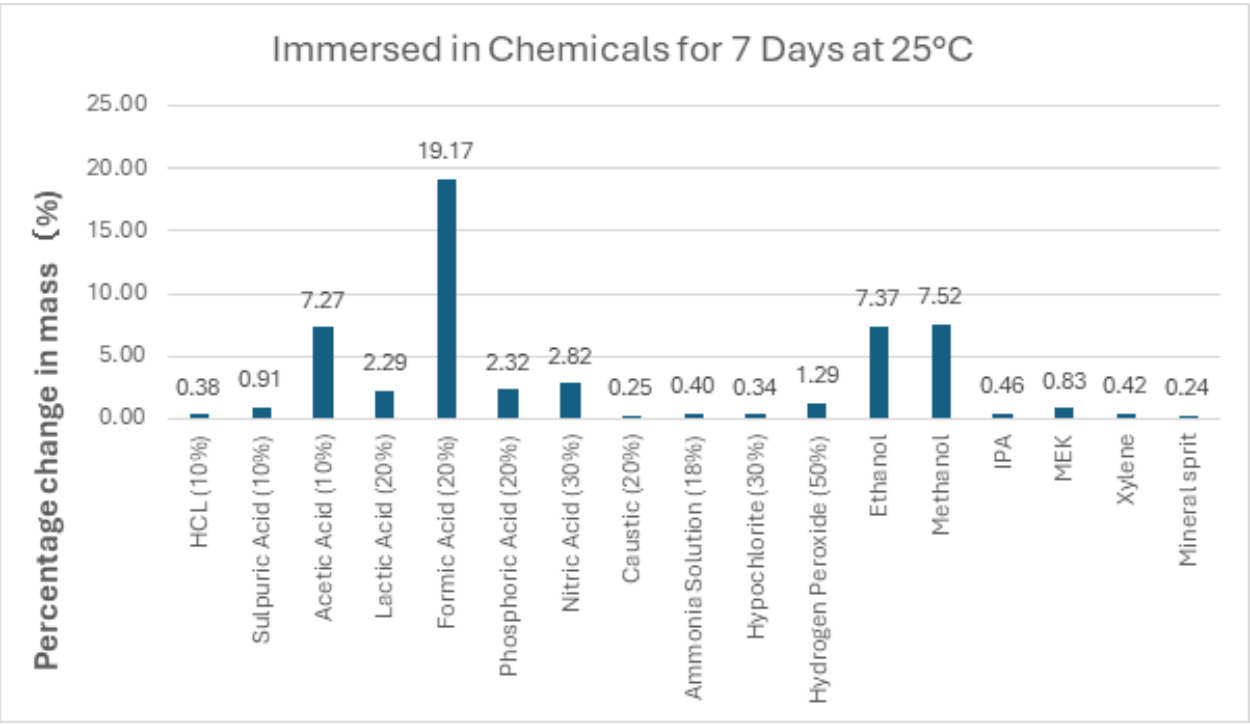
CHEMICAL RESISTANCE CHART

Chemicals Solutions	Chemical Resistance
HCL (10%)	★★★
Sulphuric Acid (10%)	★★★
Acetic Acid (10%)	★★
Lactic Acid (20%)	★★
Formic Acid (20%)	NR
Phosphoric Acid (20%)	★★
Nitric Acid (30%)	★★
Caustic (20%)	★★★
Ammonia Solution (18%)	★★★
Hypochlorite (30%)	★★★
Hydrogen Peroxide (50%)	★★★
Ethanol	★
Methanol	★
IPA	★★★
MEK	★★
Xylene	★★★
Mineral Spirit	★★★

KEY
★ (Fair)
★★ (Good)
★★★ (Excellent)
NR (not Recommended)


Immersed in Chemicals for 7 Days at 25°C
Percentage change in hardness (%)
0.0
-20.0
-40.0
-60.0
-80.0
-100.0
-120.0
HCL (10%)
Sulpuric Acid (10%)
Acetic Acid (10%)
Lactic Acid (20%)
Formic Acid (20%)
Phosphoric Acid (20%)
Nitric Acid (30%)
Caustic (20%)
Ammonia Solution (18%)
Hypochlorite (30%)
Hydrogen Peroxide (50%)
Ethanol
Methanol
IPA
MEK
Xylene
Mineral sprit
-3.0
-2.9
-30.4
-7.2
-97.1
-5.8
-5.8
-1.4
-2.9
-0.1
-2.9
-62.3
-62.3
-4.3
-8.7
-5.8
-2.9


Immersed in Chemicals for 7 Days at 25°C
Percentage change in mass (%)
25.00
20.00
15.00
10.00
5.00
0.00
HCL (10%)
Sulpuric Acid (10%)
Acetic Acid (10%)
Lactic Acid (20%)
Formic Acid (20%)
Phosphoric Acid (20%)
Nitric Acid (30%)
Caustic (20%)
Ammonia Solution (18%)
Hypochlorite (30%)
Hydrogen Peroxide (50%)
Ethanol
Methanol
IPA
MEK
Xylene
Mineral sprit
0.38
0.91
7.27
2.29
19.17
2.32
2.82
0.25
0.40
0.34
1.29
7.37
7.52
0.46
0.83
0.42
0.24