RESSI EPO CHEM COAT 406

Low viscosity Chemical Resistant
Epoxy Top Coat

RESSICHEM®
adding life and value to your property

Ressi EPO Chem Coat 406 is a low viscosity chemical resistant Epoxy top coat Specially designed for concrete and metal surfaces. This Epoxy top coat is a solvent free two component mix based on specially modified Bisphenol A based Resins and a specially formulated Modified chemical resistant aliphatic amine based epoxy curing agent which is free from Nonyl phenol. This is specially formulated for concrete and metal surface. Its high chemical resistant nature makes it an ideal coating for a variety of substrates. **Ressi EPO Chem Coat 406** is also compatible with a variety of other substrates such as wood, ceramics, leather, glass, selected plastics and so on. This is also available in several colours.

ADVANTAGES

- **Outstanding Chemical Resistance:** Provides superior protection against a wide range of aggressive chemicals, making it suitable for industrial, chemical, and harsh environments.
- **Solvent-Free Formulation:** Eliminates harmful solvents, ensuring a safer and eco-friendly application process while reducing environmental impact.
- **Low Viscosity:** Ensures easy application and excellent flow characteristics, leading to a smooth and uniform finish.
- **Versatile Substrate Compatibility:** Adheres exceptionally well to various substrates, including concrete, metal, wood, ceramics, leather, glass, and selected plastics.
- **Enhanced Durability:** Protects substrates from wear, chemical attack, and environmental degradation, ensuring long-term performance.
- **High-Performance Binder System:** Specially modified Bisphenol A-based resins and aliphatic amine curing agents provide exceptional bonding strength and mechanical properties.
- **Wide Range of Color Options:** Available in multiple colors to suit aesthetic or functional requirements of diverse applications.
- **Free from Nonyl Phenol:** Environmentally safer and compliant with modern regulatory standards for chemical coatings.
- **UV and Abrasion Resistance:** Offers excellent resistance to UV exposure and mechanical wear, making it suitable for outdoor and high-traffic areas.
- **Seamless Finish:** Provides a smooth, seamless, and attractive finish, enhancing the appearance and hygiene of coated surfaces.
- **Versatile Application:** Ideal for industries such as construction, manufacturing, chemical processing, and infrastructure, offering broad usability.
- **Easy Maintenance:** Once applied, the coating is easy to clean and maintain, contributing to reduced long-term maintenance costs.

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SURFACE PREPARATION

It is recommended to apply **Ressi EPO Chem Coat 406** over a properly primed surface. The surface preparation guidelines need to be followed as per the primer recommended in the system. General surface preparation guidelines are as follows:

For Concrete Surfaces:

Surface Inspection: Ensure the concrete surface is structurally sound, clean, and free from contaminants such as grease, oil, dirt, loose particles, and curing compounds.

Cleaning: Use mechanical methods like grinding, abrasive blasting, or shot blasting to remove surface contaminants and create a clean, open texture. Wash the surface with clean water and allow it to dry completely.

Moisture Testing: Check the moisture content of the concrete. The substrate must have a moisture content below 4% to ensure proper adhesion. For damp concrete, ensure the primer is suitable for such conditions or use specialized methods to reduce moisture levels. Incase high levels of initial moisture persists, Application of other chemical resistant moisture cure primers from the ressichem range can be used.

Crack Repair and Filling: of other Fill any visible cracks, joints, or holes with a suitable epoxy filler to provide a smooth and uniform surface.

Surface Profile: Achieve a concrete surface profile as per International Concrete Repair Institute (ICRI) guidelines for optimal adhesion.

For Metal Surfaces

Surface Inspection: Inspect the metal surface for rust, mill scale, grease, oil, or other contaminants that could interfere with adhesion.

Cleaning: Use solvent cleaning or detergent washing to remove grease, oil, and dirt. Follow this with a thorough rinse using clean water. Allow the surface to dry completely before proceeding.

Rust and Mill Scale Removal: Use abrasive blasting as per proper internaltional standards to remove rust, mill scale, and existing coatings. For less aggressive preparation, hand or power tool cleaning as per internaltional norms may suffice, but optimal adhesion is achieved with abrasive blasting.

Surface Profile: Achieve an anchor profile of 50-75 microns for proper mechanical bonding of the primer.

Passivation: After cleaning, apply the primer immediately to prevent flash rusting or oxidation of the metal surface.

General Notes

Temperature and Humidity: Ensure the substrate and ambient temperatures are within the recommended range (refer to the product technical table). Avoid application in high humidity or damp conditions.

Surface Dryness: Ensure all surfaces are dry and free from standing water before applying the primer.

Testing: Conduct a small adhesion test if surface conditions are uncertain to ensure compatibility and performance.

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MIXING AND APPLICATION GUIDELINES

Mixing Procedure

Inspect Components: Ensure the base (Part A) and curing agent (Part B) are free from contamination and at room temperature (15-35°C) before mixing.

Mixing Ratio: Follow the specific mixing ratio mentioned in the product datasheet (e.g., by weight or volume). Accurate measurement is crucial to ensure proper curing and performance.

Mixing Process: Pour Part B (curing agent) into Part A (base) slowly while stirring with a mechanical mixer at a low speed (300-400 RPM). Mix for 3-5 minutes until a homogeneous mixture is achieved, ensuring there are no streaks or unmixed material.

Application Procedure

Priming (if Required): Apply **Ressi EPO Chem Coat 406** or another compatible primer to ensure optimal adhesion and performance.

Application Tools: Apply the primer using a brush, roller, or airless spray equipment depending on the project requirements. Ensure the tools are clean and suitable for epoxy-based materials.

First Coat Application: Apply the first coat evenly, ensuring the recommended wet film thickness (WFT) is achieved. Avoid leaving puddles or excess material on the surface.

Curing Time Between Coats: Allow the first coat to cure for the recommended time (typically 8-12 hours at 25°C) before applying the second coat. Ensure the surface is tack-free before proceeding.

Second Coat Application: Repeat the process for the second coat to achieve the desired dry film thickness (DFT) of 80 to 100 microns minimum or as recommended by the consultant.

Curing and Post-Application

Initial Curing: Allow the coating to cure in a controlled environment, maintaining the recommended temperature and humidity levels.

Full Cure: The coating achieves full chemical and mechanical properties after the specified curing period (typically 7 days at 25°C).

Avoidance During Curing: Protect the coated surface from water, heavy loads, or chemical exposure during the initial curing phase.

Clean-Up: Clean all application tools and equipment immediately after use with a suitable solvent, such as xylene or an epoxy thinner

HEALTH & SAFETY

Personal Protective Equipment (PPE): Wear gloves, goggles, and a mask to protect against skin contact, fumes, and inhalation of particles.

Ventilation: Ensure proper ventilation in enclosed or poorly ventilated spaces during application to avoid exposure to fumes.

Waste Disposal: Dispose of unused material and cleaning solvents in accordance with local environmental regulations.

Spills and Disposal: Handle spills immediately using absorbent material and dispose of waste in accordance with local regulations.

LIMITATIONS

Ensure ambient and substrate temperatures are within the recommended range (10-35°C) during application. Avoid application in extreme temperatures or direct sunlight.
Avoid applying in high humidity (above 85%) or when dew point conditions may cause condensation on the substrate.
Conduct a small patch test if substrate or environmental conditions are uncertain to ensure proper adhesion and compatibility.

PACK SIZE

Ressi EPO Chem Coat 406 Is available in the following packag-

1.5 KG Pack :	Part A 1 KG Part B 500g
15 KG Pack :	Part A 10 KG Part B 05 KG
45 KG Pack :	Part A 30 KG Part B 15 KG

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TECHNICAL TABLE

Property	Test Method	Result
Appearance	-	Colored, Medium viscosity Liquid
Color	-	As per shade card provided (Please refer to shade card for color reference)
Mix ratio (Part A: Part B)	-	100: 50
Mix viscosity (cPs)	Theoretical	500 - 800
Mixed Density	ASTM D 1475	1.09 g /cc
Coverage per kg material @ 500 Micron thickness	-	18 - 20 SFT
Working time	-	40 minutes
Gel time	-	2 - 3 Hours
Tack Free Time	-	6 - 8 Hours (24 Hours if average temperature is below 25°C)
Time until Foot Traffic	-	24 Hours
Time Until all Traffic	-	48 Hours
Full Cure Time	-	7 days (14 Days if average temperature is below 25°C)
Flexural Strength (MPa)	ASTM D 790	77 @ 7 Days
Compressive Strength (MPa)	ASTM D 695	98.0 @ 7 Days

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

CURED SYSTEM PROPERTIES

Property	Test Method	100/50
*Flexural Strength	ASTM D 790	81.2 MPa
*Compressive Strength - Ultimate	ASTM D 695	70.5 MPa

***Typical results under laboratory conditions.**

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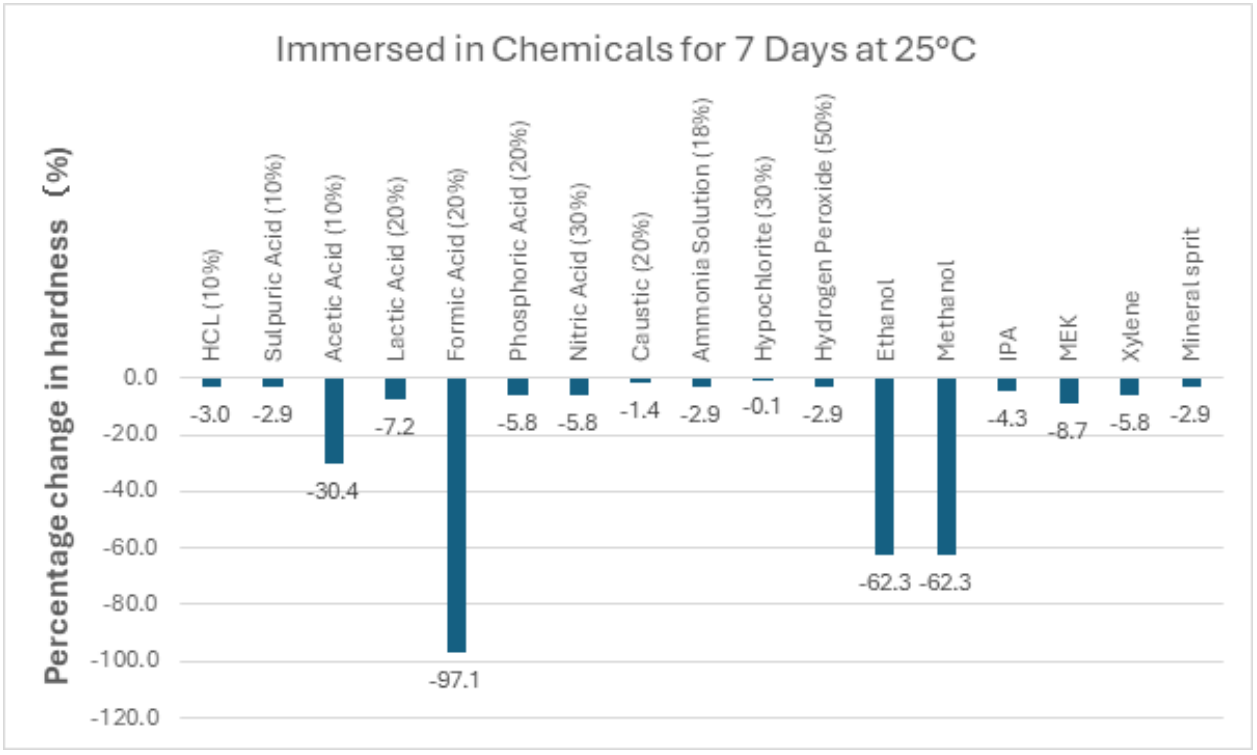
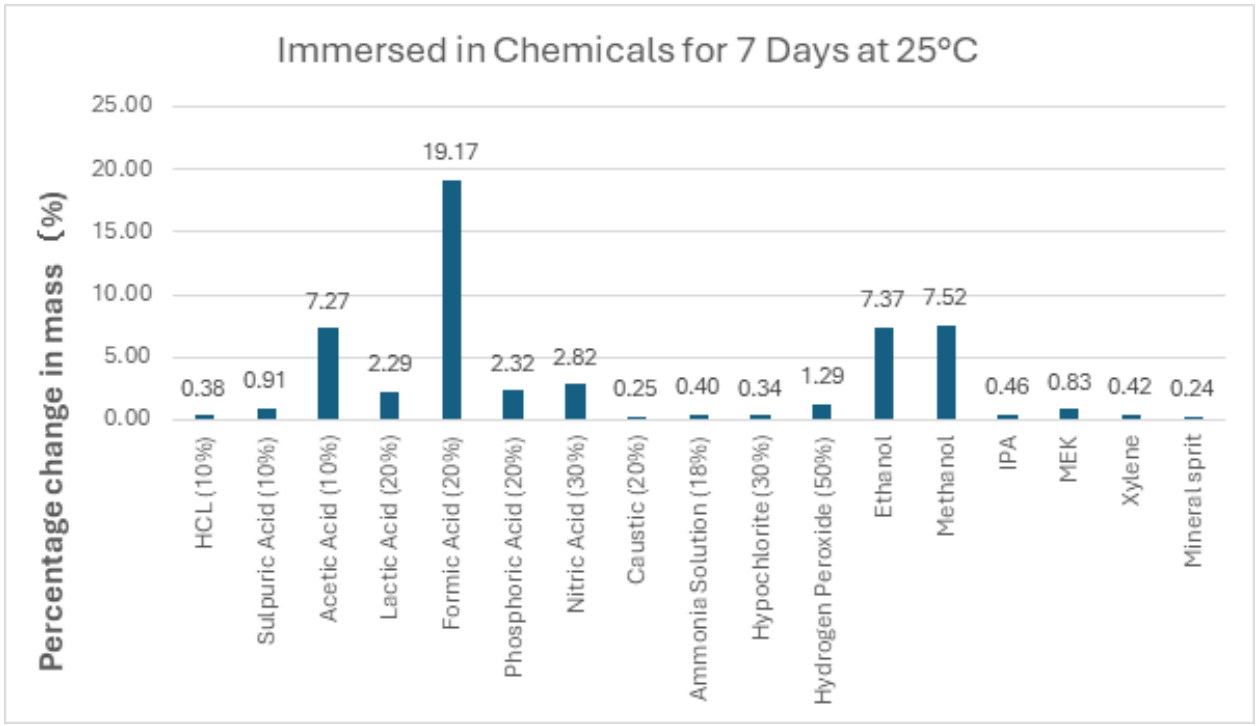
CHEMICAL RESISTANCE CHART

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)

TECHNICAL DATASHEET RESSI EPO CHEM COAT 406





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