

## HILTI 2123404

# Hilti Injectable Mortar Epoxy RE 500-V3 Instruction Manual

Model: 2123404 | Brand: HILTI

## 1. INTRODUCTION

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This manual provides essential information for the safe and effective use of the Hilti Injectable Mortar Epoxy RE 500-V3. This high-performance epoxy is designed for various anchoring applications, offering technical superiority and reliability. It is suitable for use in a wide range of temperatures and conditions, including water-filled holes.

## 2. SAFETY INFORMATION

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Always read and understand all safety data sheets (SDS) and product labels before use. Adhere to local regulations and safety standards.

- Wear appropriate personal protective equipment (PPE), including safety glasses, gloves, and protective clothing.
- Ensure adequate ventilation in the work area.
- Avoid contact with skin and eyes. In case of contact, rinse immediately with plenty of water and seek medical advice.
- Do not ingest. If swallowed, do not induce vomiting; seek medical attention immediately.
- Keep out of reach of children.
- Store in a cool, dry place away from direct sunlight and sources of ignition.
- Dispose of unused material and empty cartridges according to local environmental regulations.

## 3. PRODUCT OVERVIEW

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The Hilti RE 500-V3 is an injectable epoxy mortar supplied in a dual-chamber cartridge, designed for dispensing with a suitable Hilti dispenser. It is formulated for high-performance anchoring in concrete and masonry.



Image: Hilti Injectible Mortar Epoxy RE 500-V3 Cartridges. This image displays two Hilti RE 500-V3 epoxy cartridges. The top cartridge shows the Hilti brand name prominently on a red band. The bottom cartridge shows "Hilti HIT-RE 500 V3" printed on its side. Both cartridges are black with red components at the dispensing end, indicating their design for use with a specialized dispenser.

## Key Features:

- High performance and technical superiority as per international approvals.
- Suitable for diamond-cored holes, especially when prepared using the TE-YRT roughening tool.
- Injectable epoxy suitable for all-year use, curing at temperatures down to  $-5^{\circ}\text{C}$  /  $23^{\circ}\text{F}$ .
- Longer working time, allowing greater flexibility during installation.
- Suitable for water-filled holes and underwater applications (depending on rod specification and approvals).

## 4. SETUP

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### 1. Hole Preparation:

- Drill the hole to the specified diameter and depth according to the application requirements and Hilti technical data.
- For diamond-cored holes, use the Hilti TE-YRT roughening tool to ensure proper bond strength.
- Clean the drilled hole thoroughly using a brush and compressed air to remove all dust and debris. Repeat cleaning until no dust is visible.

### 2. Cartridge Preparation:

- Remove the cap from the cartridge.
- Attach a new, clean mixing nozzle to the cartridge. Ensure it is securely fastened.
- Insert the prepared cartridge into the appropriate Hilti dispenser.

### 3. Dispensing Initial Material:

- Before injecting into the anchor hole, dispense a small amount of material (approximately 3-4 trigger pulls) onto a piece of cardboard or waste material until a consistent, uniformly mixed color is achieved. This ensures proper mixing of the two components.

## 5. OPERATING INSTRUCTIONS

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Follow these steps for proper application of the Hilti RE 500-V3 epoxy mortar:

### 1. Injection into Hole:

- Insert the mixing nozzle to the bottom of the prepared hole.
- Begin injecting the epoxy, slowly withdrawing the nozzle as the hole fills. Ensure no air voids are trapped.
- Fill the hole approximately 2/3 full, or as specified by the anchor design.

## 2. **Anchor Installation:**

- Immediately insert the anchor element (e.g., threaded rod, rebar) into the filled hole with a slight twisting motion to ensure full encapsulation and removal of air bubbles.
- Ensure the anchor element is centered and at the correct embedment depth.

## 3. **Curing Time:**

- Allow the epoxy to cure fully before applying any load. Curing times vary based on ambient and base material temperature. Refer to Hilti technical data for specific curing schedules.
- The product cures at temperatures down to -5°C (23°F).

## 4. **Working Time:**

- The product offers a longer working time, providing flexibility during installation. Be mindful of the specified working time to ensure proper application before the epoxy begins to set.

## 5. **Water-Filled and Underwater Applications:**

- For water-filled holes or underwater applications, follow specific Hilti guidelines and approvals for rod specification and installation procedures to ensure optimal performance.

# 6. MAINTENANCE

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Proper storage and handling are crucial for maintaining product integrity and performance.

- Store cartridges in their original packaging in a cool, dry place, away from direct sunlight and extreme temperatures.
- Ensure cartridges are sealed properly when not in use to prevent hardening of the material in the nozzle or cartridge opening.
- Do not reuse mixing nozzles. Always use a new, clean mixing nozzle for each new application or after a significant pause in work.
- Check the expiration date on the cartridge before use. Do not use expired material.

# 7. TROUBLESHOOTING

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If you encounter issues during application, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Material not mixing properly (streaky color)	Insufficient initial dispensing; clogged or incorrect mixing nozzle.	Dispense more material until uniform color is achieved. Replace mixing nozzle. Ensure correct nozzle type is used.
Epoxy not curing or curing too slowly	Low temperature; improper mixing; expired material.	Ensure ambient and base material temperatures are within specified range. Verify proper mixing. Check expiration date of cartridge.
Difficulty dispensing material	Clogged nozzle; material too cold; incorrect dispenser.	Replace nozzle. Allow cartridge to warm to room temperature. Use the correct Hilti dispenser for the cartridge size.
Anchor not fully encapsulated	Insufficient epoxy injected; rapid anchor insertion.	Ensure hole is filled to recommended level. Insert anchor slowly with twisting motion.

## 8. SPECIFICATIONS

Attribute	Value
Product Name	Hilti Injectable Mortar Epoxy RE 500-V3
Model Number	2123404
Brand	HILTI
Form	Cartridge
Volume	16.9 Oz (per cartridge)
Curing Temperature Range	Down to -5°C / 23°F
Application Suitability	Diamond-cored holes, water-filled holes, underwater applications
Compatible Material (for anchoring)	Concrete, masonry (implied by epoxy use), Alloy Steel (as per product spec)

## 9. WARRANTY AND SUPPORT

For detailed warranty information and technical support regarding the Hilti Injectable Mortar Epoxy RE 500-V3, please refer to the official Hilti website or contact Hilti customer service directly. Warranty terms and conditions may vary by region and product. Always ensure you are using genuine Hilti products and following all installation guidelines to maintain warranty validity.

For further assistance, visit [www.hilti.com](http://www.hilti.com) or contact your local Hilti representative.