

HILTI 273662

HILTI HIT-SC 22 x 50 Adhesive Composite Sleeve Anchor Systems User Manual

Model: 273662

1. INTRODUCTION

This manual provides essential information for the safe and effective use of the HILTI HIT-SC 22 x 50 Adhesive Composite Sleeve Anchor System. Please read these instructions carefully before installation and retain for future reference. This sleeve is designed to optimize the performance of Hilti HIT injection mortars in hollow or weak base materials.

2. SAFETY INFORMATION

Always wear appropriate personal protective equipment (PPE) such as safety glasses, gloves, and hearing protection during drilling and installation. Ensure the work area is well-ventilated. Follow all local safety regulations and guidelines. Keep the product and associated materials out of reach of children. Refer to the Safety Data Sheet (SDS) for the specific Hilti HIT injection mortar being used.

3. PRODUCT OVERVIEW

The HILTI HIT-SC 22 x 50 Adhesive Composite Sleeve is a plastic component used in conjunction with Hilti HIT injection mortars and threaded rods or rebar to create reliable anchor points. Its design ensures proper mortar distribution and prevents mortar run-out in hollow or porous base materials.

Components:

- Composite Sleeve (HIT-SC 22 x 50)
- *Note: Hilti HIT injection mortar and threaded rod/rebar are required and sold separately.*



Image 1: HILTI HIT-SC 22 x 50 Adhesive Composite Sleeve. This image displays the plastic composite sleeve, which is an integral part of the Hilti adhesive anchor system.

4. SETUP AND INSTALLATION

Proper installation is critical for the performance and safety of the anchor system. Always refer to the specific Hilti HIT injection mortar technical data for detailed curing times, application temperatures, and specific drill bit diameters.

Required Tools and Materials (not included):

- Rotary hammer drill
- Appropriate drill bit (matching sleeve diameter and base material)
- Hilti HIT injection mortar and dispenser
- Threaded rod or rebar
- Cleaning brush and air pump (for hole cleaning)
- Personal Protective Equipment (PPE)

Installation Steps:

1. **Drill Hole:** Using a rotary hammer drill, create a hole in the base material to the specified diameter and depth. For the HIT-SC 22 x 50, the recommended anchor size is 16 mm, and the outside diameter is 15/16 inch. Ensure the hole is straight and free of obstructions.
2. **Clean Hole:** Thoroughly clean the drilled hole. Use a stiff brush to remove loose particles, then use an air pump or compressed air to blow out dust. Repeat this process until no dust is visible in the hole. Proper cleaning is essential for mortar adhesion.
3. **Insert Sleeve:** Carefully insert the HILTI HIT-SC 22 x 50 composite sleeve into the cleaned drill hole. Push it in until it is flush with the surface of the base material. Ensure the sleeve is fully seated.
4. **Inject Mortar:** Prepare the Hilti HIT injection mortar according to its specific instructions. Dispense the mortar into the sleeve, starting from the bottom, until the sleeve is filled approximately two-thirds full. Ensure there are no air voids during injection.

5. **Insert Anchor Element:** Immediately insert the threaded rod or rebar into the mortar-filled sleeve with a slight twisting motion until it reaches the bottom of the hole. Ensure the anchor element is centered within the sleeve.
6. **Cure Time:** Allow the mortar to cure completely according to the manufacturer's specifications for the specific Hilti HIT injection mortar used. *Do not load the anchor until the full cure time has passed.* Premature loading can compromise the anchor's strength.

5. OPERATING INSTRUCTIONS

Once the HILTI HIT-SC 22 x 50 Adhesive Composite Sleeve system is installed and the mortar has fully cured, the anchor is ready to bear the specified load. It is crucial to ensure that the applied load does not exceed the permissible load values for the specific Hilti HIT injection mortar and base material combination, as detailed in the mortar's technical data sheet. Overloading can lead to anchor failure.

6. MAINTENANCE

The HILTI HIT-SC 22 x 50 composite sleeve itself requires no specific maintenance after installation. However, regular inspection of the anchored element and the surrounding base material is recommended, especially in critical applications or harsh environments, to ensure long-term integrity. Check for any signs of corrosion on the anchor element, cracking in the base material, or loosening of the connection. Address any issues promptly.

7. TROUBLESHOOTING

- **Anchor not holding:**

Possible Causes: Incorrect drill hole diameter or depth, insufficient cleaning of the hole, incorrect Hilti HIT injection mortar used, improper mixing or dispensing of mortar, insufficient cure time.

Solutions: Verify all installation steps, ensure proper hole cleaning, confirm mortar type and application, allow full cure time before loading.

- **Sleeve difficult to insert:**

Possible Causes: Drill hole diameter too small, debris obstructing the hole.

Solutions: Check drill bit size against specifications, re-clean the hole thoroughly.

- **Mortar not curing:**

Possible Causes: Expired mortar, improper mixing of two-component mortar, ambient temperature outside specified range.

Solutions: Check mortar expiration date, ensure thorough mixing, verify ambient temperature against mortar technical data.

8. SPECIFICATIONS

Feature	Detail
Model Number	273662
Anchor Size	16 mm
Anchor Length	1-15/16 in

Outside Diameter	15/16 in
Material Composition	Plastic
Environmental Conditions	Indoor (damp, dry, ventilated facade), Outdoor
Brand	HILTI
Item Weight	1 pounds

9. WARRANTY AND SUPPORT

For detailed warranty information, technical support, and product inquiries, please refer to the official Hilti website or contact your local Hilti representative. It is recommended to keep your purchase receipt for any warranty claims or product support needs.

Hilti Official Website: www.hilti.com