November 7, 2019

SUBJECT: Simpson Strong-Tie® SET-3G™ High-Strength Epoxy Adhesive used with Hilti Roughening Tool TE-YRT

To Whom It May Concern:

This letter addresses the use of the Hilti Roughening Tool TE-YRT with SET-3G™ High-Strength Epoxy Adhesive in holes drilled into concrete with a diamond core drill bit.

The evaluation report for SET-3G (ICC-ES ESR-4057) presents characteristic bond strength values for reinforcing bars and threaded rods installed per our recommended installation instructions. The instructions note that a carbide-tipped drill bit meeting the requirements of ANSI B212.15 must be used.

Based on tension tests conducted by Simpson Strong-Tie at our ISO 17025-accredited laboratory, it has been determined that holes for SET-3G anchors may alternatively be drilled using a diamond core drill bit and then roughened with the TE-YRT Hilti roughening tool. An adjustment factor of 0.90 shall be applied to the published characteristic bond strength ($\tau_k$) listed in ESR-4057 Tables 5 and 6 when this installation technique is used.

The steps that should be followed to drill and prepare holes for SET-3G anchor installations when using a diamond core drill and the TE-YRT Hilti roughening tool are noted below:

1. Core-drill hole with the appropriate sized bit as noted on the cartridge label.
2. Remove standing water.
3. With the rotary hammer set to the hammer-and-rotation mode, roughen the hole with a TE-YRT Hilti roughening tool for a period of 2.5 times the effective embedment depth (in inches) in seconds while moving the tool up and down repeatedly over the entire embedment depth. (Example: $h_{ef} = 4$ in. Time required for roughening = $4 \times 2.5 = 10$ sec.)
4. Flush out the hole a minimum of two times with water until water runs clear.
5. Remove standing water.
6. Blow out hole with oil-free compressed air for at least 30 seconds.
7. Install SET-3G adhesive and threaded rod or rebar per the Manufacturer’s Printed Installation Instructions (MPII).

The information in this letter is valid until 11/30/2020 when it will be re-evaluated by Simpson Strong-Tie. Please visit strongtie.com for additional pertinent information. If you have questions or need further assistance regarding this matter, please contact the Simpson Strong-Tie engineering department at 800.999.5099.

Sincerely,

SIMPSON STRONG-TIE COMPANY INC.