



EN

DECLARATION OF PERFORMANCE

according to Annex III of the Regulation (EU) Nr. 305/2011 (Construction Products Regulation)

Hilti S-HP02SS 7.2x9
No. Hilti-SF-DoP-033

1. Unique identification code of the product-type: Hilti S-HP02SS 7.2x9

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4): Type and Lot-Number displayed on the packaging

3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:

| | |
|----------------------|--|
| Generic type and use | Fastener for the rear fixing of façade panels made of high-pressure decorative laminates (HPL) according to EN 438-7 |
| Product size covered | 7.2x9 |
| Base material | HPL façade panels - EN 438-7 |
| Fastened material | Hilti Hangers MFT-HAF 50/RL 8.5 or MFT-H 40/RL 8.5 made of Aluminium EN AW-6063 T66 - EN 573-1 |
| Fastener material | Stainless steel 1.4401 - EN 10088-2 |
| Loading | Static & quasi static |

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5): Hilti AG, Business Unit Direct Fastening, 9494 Schaan, Fürstentum Liechtenstein

5. Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2): n.a.

6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: System 2+

7. In case of the declaration of performance concerning a construction product covered by a harmonized standard: n.a.

8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued: On the basis of EAD 330030-00-0601 issued ETA-21/0567. The notified body MPA-Karlsruhe 0769 performed third party tasks under system 2+ and issued the certificate of conformity of the production control.

9. Declared performance:

| Essential characteristic | Performance | Harmonized technical specification |
|---|---|------------------------------------|
| Characteristic resistance to breakout or pull-out failure under tension load | see Table 1 and Table 2 | EAD 330030-00-0601 |
| Characteristic resistance to breakout or pull-out failure under shear load | see Table 1 and Table 2 | |
| Characteristic resistance to breakout or pull-out failure under combined tension and shear load | see Table 3 | |
| Edge distance and spacing | see Table 1 and Table 2 | |
| Durability | Stainless steel 1.4401 - EN 10088-2. CRC III - EN 1993-1-4:2015. | |
| Characteristic resistance to steel failure under tension and shear load | see Table 4 | |
| Reaction to fire | Class A1 - EN 13501-1 | |
| Resistance to fire | no performances assessed | |

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:

Lars Taenzer
Head of Business Unit Direct Fastening

Pierre Hohmeier
Head of Quality Screw Fastening

Hilti AG, Schaan, 31.07.2021

Table 1: Characteristic resistance for fastener Hilti S-HP02SS 7.2x9 to breakout or pull-out failure

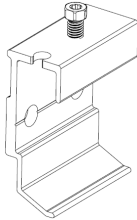
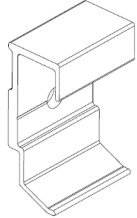
| Fastener with Hanger | | | S-HP02SS 7.2x9 with MFT-HAF 50/RL 8,5 | | |
|-------------------------------------|------------------|------|--|-------------------------|--------------------|
| | | |  | | |
| Panel manufacturer and panel type | | | Trespa (Meteon) | Fundermax (Max Compact) | Resopal (Resoplan) |
| Embedment depth of the fastener | h_s | [mm] | 4,7 | | |
| Characteristic tension resistance | N_{Rk} | [kN] | 0,94 ³⁾ | 1,38 ³⁾ | 1,14 ³⁾ |
| Characteristic shear resistance | V_{Rk} | [kN] | 3,52 ³⁾ | 2,97 ³⁾ | 3,39 ³⁾ |
| Edge distance | a_{rx}, a_{ry} | [mm] | ≥ 40 | | |
| Spacing ²⁾ | a_x, a_y | [mm] | ≥ 135 ≤ 1000 for $8 \text{ mm} \leq h_{nom} < 10 \text{ mm}$ ≤ 1286 for $10 \text{ mm} \leq h_{nom} < 12 \text{ mm}$ ≤ 1715 for $12 \text{ mm} \leq h_{nom} < 13 \text{ mm}$ ≤ 2000 for $h_{nom} \geq 13 \text{ mm}$ | | |
| Installation torque | T_{inst} | [Nm] | 5,0 Nm | | |
| Partial safety factor ¹⁾ | γ_M | [-] | 1,8 | | |

Table 2: Characteristic resistance for fastener Hilti S-HP02SS 7.2x9 to breakout or pull-out failure

| Fastener with Hanger | | | S-HP02SS 7.2x9 with MFT-H 40/RL 8,5 | | |
|-------------------------------------|------------------|------|--|-------------------------|--------------------|
| | | |  | | |
| Panel manufacturer and panel type | | | Trespa (Meteon) | Fundermax (Max Compact) | Resopal (Resoplan) |
| Embedment depth of the fastener | h_s | [mm] | 4,7 | | |
| Characteristic tension resistance | N_{Rk} | [kN] | 0,54 | 0,71 | 0,67 |
| Characteristic shear resistance | V_{Rk} | [kN] | 2,06 | 1,86 | 2,26 |
| Edge distance | a_{rx}, a_{ry} | [mm] | ≥ 40 | | |
| Spacing ²⁾ | a_x, a_y | [mm] | ≥ 135 ≤ 1000 for $8 \text{ mm} \leq h_{nom} < 10 \text{ mm}$ ≤ 1286 for $10 \text{ mm} \leq h_{nom} < 12 \text{ mm}$ ≤ 1715 for $12 \text{ mm} \leq h_{nom} < 13 \text{ mm}$ ≤ 2000 for $h_{nom} \geq 13 \text{ mm}$ | | |
| Installation torque | T_{inst} | [Nm] | 5,0 Nm | | |
| Partial safety factor ¹⁾ | γ_M | [-] | 1,8 | | |

¹⁾ In absence of national regulations

²⁾ The maximum supporting distance from the load bearing capacity calculation of the HPL panel must be taken into account. The smaller value governs.

³⁾ Characteristic value valid for two fastener Hilti S-HP02SS 7.2x9

The characteristic values for tension and shear resistance given in Table 1 and 2 refer to the minimum value of the bending stress resistance of the HPL sheets corresponding to EN 438-6. The characteristic resistance values for tension and shear force can be increased by taking into consideration the factor α_{F0} as defined in Annex B2 of ETA-21/0567.



Table 3: Characteristic resistance to breakout or pull-out failure under combined tension and shear load

| Load combination | Interaction provision |
|------------------|--|
| Tension | $\frac{N_{Ed}}{N_{Rd}} \leq 1,0$ |
| Shear | $\frac{V_{Ed}}{V_{Rd}} \leq 1,0$ |
| Tension – Shear | $\frac{N_{Ed}}{N_{Rd}} + \frac{V_{Ed}}{V_{Rd}} \leq 1,0$ |

Table 4: Characteristic tension and shear resistance for fastener Hilti S-HP02SS 7,2x9 to steel failure

| | | | |
|---|-----------------|------|-------|
| Characteristic steel tension resistance | $N_{Rk,s}$ | [kN] | 10,62 |
| Partial safety factor ¹⁾ | $\gamma_{Ms,N}$ | [-] | 1,5 |
| Characteristic steel shear resistance | $V_{Rk,s}$ | [kN] | 5,31 |
| Partial safety factor ¹⁾ | $\gamma_{Ms,V}$ | [-] | 1,25 |

¹⁾ In absence of national regulations