

# DECLARATION OF PERFORMANCE

**CONF-DOP\_HDB-07-23**

Nr. H-09-12/0454-1/1

1.	Unique identification code of the product-type	<b>HALFEN HDB Shear Rail</b>
2.	Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4)	<b>HALFEN HDB Shear rail see Annex 1, 2, 3, 4</b>
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	HALFEN HDB double-headed studs with weldable ribbed shafts or HDB-G double-headed studs with weldable smooth shafts as punching shear reinforcement
	Product size covered	HDB-G 10, HDB-G 12, HDB-G 14, HDB-G 16, HDB-G 18 and HDB-G 20 with smooth shafts HDB 10, HDB 12, HDB 14, HDB 16, HDB 20 and HDB 25 with ribbed shafts
	For use in	Concrete C20/25 to C50/60 acc. to EN 206-1:2000
	Material and intended use	Steel material with $f_{yk} \geq 500$ MPa, $(f_t/f_y)_k \geq 1.05$ and $\epsilon_{uk} \geq 2,5\%$ acc. to EN 1992-1-1, annex C and provided data sheet
	Loading	Static, quasi static and fatigue loading
4.	Name, registered trade name or registered trademark and contact address of the manufacturer as required pursuant to Article 11(5)	Leviat GmbH, Liebigstraße 14, 40764 Langenfeld, Germany
5.	Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2)	-
6.	System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V	System 1+
7.	In case of the declaration of performance concerning a construction product covered by a harmonised standard	-
8.	In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued	Deutsches Institut für Bautechnik (DIBt) issued ETA-12/0454 on the basis of EAD 160003-00-0301. The notified body 0432 performed under system 1+ (i) Initial inspection of the manufacturing plant and of factory production control; (ii) Continuous surveillance, assessment and evaluation of factory production control;

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Declared performance						
	Essential Characteristics	Design Method	Performance	Harmonized Technical Specification		
9.	Punching shear resistance at interior columns	EOTA TR 060; EN 1992-1-1	Annex 5 to 7	EAD 160003-00-0301		
	Punching shear resistance of footings and ground slabs		Annex 8			
	Punching shear resistance at edge- and corner-columns		Annex 9 to 11			
	Punching shear resistance near openings		Annex 9,11			
	characteristic fatigue strength		$\Delta\sigma_{Rsk,n=2*10^6} = 70 \text{ MPa}$			
	Increasing factor for punching shear resistance		$k_{pu,sl} / k_{pu,fo} = 1,96 / 1,5$			
	Reaction to fire		Class A1			
	Where pursuant to Article 37 or 38 in the Specific Technical Documentation has been used, the requirements with which the product complies:				-	
	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.						

Langenfeld, 05.07.2023

Signed for and on behalf of the manufacturer by



Stephan Bauerdick  
(Operations Director | Central Operations)



Dr. Ing. Dirk Albartus  
(Prokurist)