



1. Unique identification code of the product-type:

**SB assembly EN 15048-1**

additional information:

assemblies of bolts and nuts according to EN 15048-1  
sizes: M8 to M27  
strength class bolts 4.6, 5.6, 8.8, 10.9  
manufacturer mark: CLEFF"  
strength class nuts 4, 5, 8, 10  
manufacturer mark: C"

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

**Non-preloaded structural bolting assemblies**

3. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

**J. vom Cleff A. Sohn GmbH & Co. KG  
Kemmannstr. 90  
D-42349 Wuppertal**

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

**System 2+**

5. In case of the declaration of performance concerning a construction product covered by a harmonised standard:

The MATERIALPRÜFUNGSAMT NORDRHEIN-WESTFALEN (MPA NRW), Marsbruchstraße 186, 44287 DORTMUND, body-no. 0432 executed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment and evaluation of factory production control under system 2+ and issued a

**certificate of conformity of the factory production control  
0432-CPR-900153-01**



6. Declared performance

Essential characteristics	Performance	Harmonised technical specification
<b>bolts</b>		
measure-, form- and positiontolerances	product class corresponding productstandard acc. EN ISO 4759-1 DIN 7990; DIN 7968: productclass C ISO 4014; ISO 4017: products $d \leq 24\text{mm}$ und $l \leq 10d$ or $150\text{mm}^{1)}$ : productclass A products $d > 24\text{mm}$ oder $l > 10d$ or $150\text{mm}^{1)}$ : productclass B <small>1) valid is the smaller value</small>	EN 15048-1
elongation	Corresponding to the property-class of the headmarking acc. : EN ISO 898-1 Cl. 4.6: 22% Cl. 5.6: 20% Cl. 8.8: 12% Cl. 10.9: 9%	EN 15048-1
tensile strength	Cl. 4.6: 400N/mm <sup>2</sup> Cl. 5.6: 500N/mm <sup>2</sup> Cl. 8.8: Products up to M10: 800N/mm <sup>2</sup> Products from M12: 830N/mm <sup>2</sup> Cl. 10.9: 1040N/mm <sup>2</sup>	
yield point	Cl. 4.6: 240N/mm <sup>2</sup> Cl. 5.6: 300N/mm <sup>2</sup> Cl. 8.8:	
proof stress	Products up to M10: 640N/mm <sup>2</sup> Products from M12: 660N/mm <sup>2</sup> Cl. 10.9: 940N/mm <sup>2</sup>	
proof load test	Cl. 4.6: 225MPa Cl. 5.6: 280MPa Cl. 8.8: Products up to M10: 580MPa Products from M12: 600MPa Cl. 10.9: 830MPa	
tensile test under wedge loading	Cl. 4.6: 400N/mm <sup>2</sup> Cl. 5.6: 500N/mm <sup>2</sup> Cl. 8.8: Products up to M10: 800N/mm <sup>2</sup> Products from M12: 830N/mm <sup>2</sup> Cl. 10.9: 1040N/mm <sup>2</sup>	
hardness	Cl. 4.6: HBW 114-209 Cl. 5.6: HBW 147-209 Cl. 8.8: Products up to M10: HBW 238-304 Products from M12: HBW 242-318 Cl. 10.9: HBW 304-361	
impact test	Cl. 4.6: NPD Cl. 5.6; 8.8; 10.9: 27J <small>gilt für <math>d \geq M16</math></small>	
durability	NPD	
emissions of dangerous substances	NPD	



Essential characteristics	Performance	Harmonised technical specification
<b>nuts</b>		
measure-, form- and positiontolerances	product class corresponding productstandard acc. EN ISO 4759-1  ISO 4032: Products ≤ M16: productclass A Products > M16: productclass B ISO 4034: productclass C	EN 15048-1
proofstress	Corresponding to the property-class of the headmarking acc. :EN ISO 898-2:  Cl. 4.: Products ≤ M16: NPD Products > M16: 510 N/mm <sup>2</sup> Cl. 5: Products M8 to M10: 590 N/mm <sup>2</sup> Products M12 to M16: 610 N/mm <sup>2</sup> Products > M16: 630 N/mm <sup>2</sup> Cl. 8: Products M8 to M10: 870 N/mm <sup>2</sup> Products M12 to M16: 880 N/mm <sup>2</sup> Products > M16: 920 N/mm <sup>2</sup> Cl. 10: Products M8 to M10: 1040 N/mm <sup>2</sup> Products M12 to M16: 1050 N/mm <sup>2</sup> Products > M16: 1060 N/mm <sup>2</sup>	EN 15048-1
hardness	Cl. 4.: Products ≤ M16: NPD Products > M16: HV 117-302 Cl. 5: Products M8 to M16: HV 130-302 Products > M16: HV 146-302 Cl. 8: Products M8 to M16: HV 200-302 Products > M16: HV 233-353 Cl. 10: HV 272-353	
durability	NPD	
emmissions of dangerous substances	NPD	EN 15048-1

