



DECLARATION OF PERFORMANCE

Nr. 0010_Knauf_Diamant_SX_15_2023-10-20

- | | |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Unique identification code of the product-type: | Knauf Diamant SX 15 mm |
| 2. Intended use/es: | Gypsum plasterboards for load-bearing applications |
| 3. Manufacturer: | Knauf Gips KG Am Bahnhof 7 D-97346 Iphofen
Tel: +49 (9323) 31-0
Fax: +49 (9323) 31-277
E-Mail: zentrale@knauf.de |
| 4. Authorised representative: | not relevant |
| 5. System/s of AVCP: | System 3 |
| 6. a) Harmonised standard: | not relevant |
| Notified body/ies: | not relevant |
| 6. b) European Assessment Document: | EAD 070001-02-0504 |
| European Technical Assessment: | ETA – 23/0395:2023-10-20 |
| Technical Assessment Body: | OIB Österreichisches Institut für Bautechnik |
| Notified body/ies: | not relevant |

7. Declared performance/s:

Essential characteristics	Performance	
1 Mechanical resistance and stability		
1. Mechanical actions perpendicular to the gypsum plasterboard		
Bending strength		
- in cross direction $f_{m,\perp,CD,k}$	3,8 MPa	EAD 070001-02-0504
- in machine direction $f_{m,\perp,MD,k}$	7,0 MPa	
Bending modulus of elasticity		
- in cross direction $E_{m,\perp,CD,k}$	4 900 MPa	EAD 070001-02-0504
- in machine direction $E_{m,\perp,MD,k}$	5 800 MPa	
Compressive strength		
- in both directions $f_{c,\perp,MCD,k}$	9,8 MPa	EAD 070001-02-0504
2. Mechanical actions in plane of the gypsum plasterboards		
Shear strength		
- in cross direction $f_{v,II,CD,k}$	4,3 MPa	EAD 070001-02-0504
- in machine direction $f_{v,II,MD,k}$	4,3 MPa	
Shear modulus		
- in cross direction $G_{v,II,CD,mean}$	2 400 MPa	EAD 070001-02-0504
- in machine direction $G_{v,II,MD,mean}$	2 400 MPa	
Compression strength		
- in cross direction $f_{c,II,CD,k}$	8,0 MPa	EAD 070001-02-0504
- in machine direction $f_{c,II,MD,k}$	8,0 MPa	
Compression modulus of elasticity		
- in cross direction $E_{c,II,CD,k}$	6 000 MPa	EAD 070001-02-0504
- in machine direction $E_{c,II,MD,k}$	6 000 MPa	
Tensile strength		
- in all directions $f_{t,II,\alpha,k}$	$MAX \begin{cases} 2,7 - 0,0145 \cdot \alpha \\ 2,0 \end{cases}$	EAD 070001-02-0504
Tensile modulus of elasticity		
- in all directions $E_{t,II,\alpha,mean}$	7 200 MPa	EAD 070001-02-0504



3. Other mechanical actions		
Load bearing capacity of the wall elements	Calculation acc. EN 1995-1-1 and ETA Annex 3	EAD 070001-02-0504
Embedment strength of fastener in boards -in both directions $f_{h,MD,k} = f_{h,CD,k}$	$16 d^{-0,7} t^{0,6}$ 1)	EAD 070001-02-0504
Head pull-through resistance of fasteners in boards	NPD	
Creep k_{def} - Service class 1 - Service class 2	3,0 4,0	
And duration k_{mod} of load		
- permanent action	Service class 1: 0,2 Service class 2: 0,15	EAD 070001-02-0504
- long action	Service class 1: 0,4 Service class 2: 0,3	EAD 070001-02-0504
- medium action	Service class 1: 0,6 Service class 2: 0,45	EAD 070001-02-0504
- short action	Service class 1: 0,8 Service class 2: 0,6	EAD 070001-02-0504
- very short action	Service class 1: 1,1 Service class 2: 0,8	EAD 070001-02-0504
Structure of cohesion of the core at high temperature	Board type F	EN 520
Dimensional stability		
Shrinkage and swelling ²⁾	$\delta_{l65,85,mean} = 0,11$ mm/m $\delta_{l65,30,mean} = -0,13$ mm/m	EAD 070001-02-0504
Density	≥ 1100 kg/m ³	EN 520
Surface hardness	Board type I	EN 520
Static ductility of dowel-type fasteners in boards	NPD	



2 Safety in case of fire		
Reaction to fire		
Gypsum plasterboards for load-bearing applications	A2-s1, d0 (B)	EN 520
3 Hygiene, health and the environment		
Water vapour permeability, μ	14 / 7,8	EN ISO 12572
Water absorption of board surface	Board type H1	EN 520
4 Safety and accessibility in use		
Hard body impact resistance	IR = 25,2 mm/mm	EN 1128
5 Protection against noise		
Airborne sound insulation	NPD	
Sound absorption	NPD	
6 Energy economy and heat retention		
Thermal conductivity, λ	0,37 W/(mK)	EN 12664
Air permability	NPD	
Coefficient of thermal expansion	NPD	
7 Aspects of durability		
Mould resistance	NPD	

1) With d as the (core)diameter of the fastener and for $1,5 \text{ mm} \leq d \leq 5,5 \text{ mm}$

2) Moisture content during service shall not change to such an extend that adverse deformation will occur

8. Appropriate Technical Documentation
and/or Specific Technical Documentation: **not relevant**

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by

Iphofen, 2024-10-20

i. V. Dr. Wolfgang Rümmler
(Head of Research & Development D/CH | Knauf Gips KG)

i. A. Sven Kramer
(Head of Drywall Systems D/CH | Knauf Gips KG)