



DECLARATION OF PERFORMANCE

Nr. 0010_Diamant_X_12,5_2013-12-02

1. Unique identification code of the product-type: **Diamant X 12,5 / ETA-13/0800**
2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4): **Knauf Diamant X 12,5 mm**
3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: **Gypsum plasterboard for load-bearing applications**
4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5): **Knauf Gips KG, Am Bahnhof 7, D-97346 Iphofen, Germany
Tel. +499323 31-0, Fax +499323 31-277, E-Mail Zentrale@Knauf.de**
6. System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: **System 3**
8. In case of the declaration of performance concerning a construction product for which a European Technical Assessment has been issued: The **Österreichische Institut für Bautechnik (TAB OIB)** has issued: **ETA-13/0800** on the basis of **CUAP, ETA-Antrag Nr. 05.04/15 as Initial Type Test. Factory production control by manufacturer.**

9. Declared performance

Essential characteristics	Performance	Harmonised technical specification
1.1 Mechanical resistance and stability - Mechanical actions perpendicular to the gypsum plasterboard		
Bending strength - in transverse direction ($f_{m,90,k}$) - in longitudinal direction ($f_{m,0,k}$)	2,5 MPa 7,5 MPa	ETA-13/0800:2013
Bending modulus of elasticity - in transverse direction ($E_{m,90,mean}$) - in longitudinal direction ($E_{m,0,mean}$)	3500 MPa 4500 MPa	ETA-13/0800:2013
Shear strength - in transverse direction ($f_{v,90,k}$) - in longitudinal direction ($f_{v,0,k}$)	1,1 MPa 1,1 MPa	ETA-13/0800:2013
Shear modulus - in transverse direction ($G_{v,90,mean}$) - in longitudinal direction ($G_{v,0,mean}$)	1600 MPa 1600 MPa	ETA-13/0800:2013
Compressive strength - perpendicular to the grain of the board ($f_{c,90,k}$)	7 MPa	ETA-13/0800:2013
1.2 Mechanical resistance and stability - Mechanical actions in plane of the gypsum plasterboard		
Bending strength - in transverse direction ($f_{m,90,k}$) - in longitudinal direction ($f_{m,0,k}$)	2 MPa 6 MPa	ETA-13/0800:2013
Bending modulus of elasticity - in transverse direction ($E_{m,90,mean}$) - in longitudinal direction ($E_{m,0,mean}$)	2100 MPa 2700 MPa	ETA-13/0800:2013
Compression strength - in transverse direction ($f_{c,90,k}$) - in longitudinal direction ($f_{c,0,k}$)	7 MPa 7 MPa	ETA-13/0800:2013
Compression modulus of elasticity - in transverse direction ($E_{c,90,mean}$) - in longitudinal direction ($E_{c,0,mean}$)	4500 MPa 4500 MPa	ETA-13/0800:2013
Tensile strength - in transverse direction ($f_{t,90,k}$) - in longitudinal direction ($f_{t,0,k}$)	0,7 MPa 2 MPa	ETA-13/0800:2013

Essential characteristics (continuation)	Performance	Harmonised technical specification
Tensile modulus of elasticity - in transverse direction ($E_{t,90,mean}$) - in longitudinal direction ($E_{t,0,mean}$)	6500 MPa 10000 MPa	ETA-13/0800:2013
1.3 Mechanical resistance and stability - other mechanical actions		
Creep - k_{def} values service class 1 / 2	3,0 / 4,0	ETA-13/0800:2013
Duration of load - k_{mod} values (action) service class 1 service class 2	(permanent/long/medium/short/very short) 0,2 / 0,4 / 0,6 / 0,8 / 1,1 0,15 / 0,3 / 0,45 / 0,6 / 0,8	ETA-13/0800:2013
Dimensional stability per 1% variation in rel. humidity	0,005 bis 0,008 mm/m	ETA-13/0800:2013
Embedding strength ($f_{h,k}$)	45 $d^{0,65}$	ETA-13/0800:2013
2 Reaction to fire		
Reaction to fire	A2-s1, d0 (B) - (EN 520)	ETA-13/0800:2013
3 Hygiene, health and environment		
Vapour permeability - μ	10 - 11 (EN ISO 12572)	ETA-13/0800:2013
Water absorption – surface	≤ 220 g/m ² (EN 520)	ETA-13/0800:2013
Water absorption – total	≤ 10 % (EN 520)	ETA-13/0800:2013
Air permeability used as exterior wall cladding	$1,4 \times 10^{-6}$ m ³ /(m ² s Pa)	ETA-13/0800:2013
6 Energy economy and heat retention		
Thermal conductivity – λ	0,27 W/(m·K) (EN 12664)	ETA-13/0800:2013
Thermal inertia, specific heat – c_p	1000 J/(kg·K) (EN ISO 10456)	ETA-13/0800:2013
- Durability		
Durability – service classes	1 and 2 (EN 1995-1-1)	ETA-13/0800:2013
Dangerous substances – DS	NPD	ETA-13/0800:2013

Where pursuant to Article 37 or 38 the Specific Technical Documentation has been used, the requirements with which the product complies: **Not relevant**

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:

Dr. Markus Biebl
(Head of Research & Development Knauf Group)

(signature)

Iphofen, 2013-12-02
(place and date of issue)