



Knauf Integral GIFAfloor DB
Raw material for
raised access floor panels

Technical data and mechanical values

Standard panels	GIFAfloor DB28 - DB42	GIFAfloor DB28 U and GIFAfloor DB30 U	Unit
Standard panel for processing	606x606	606x606	mm
Density	≥ 1500	≥ 1100	kg/m ³
Surface priming	yes	yes	-
Dimension calibrations			
Thickness	+/-0.2	+/-0.2	mm
Length / Width	+2/-0	+2/-0	mm
Torsion	≤ 0.5	≤ 0.5	mm
Angular accuracy	≤ 1.2	≤ 1.2	mm
Straightness of the edges	+/-0.3	+/-0.3	mm
Diagonal accuracy	+/-0.5	+/-0.5	mm
General values of strength			
Surface hardness acc. to Brinell	≥ 40	≥ 20	N/mm ²
Pull off bond strength	≥ 1.0	≥ 0.6	N/mm ²
Flexural strength	≥ 10.5	≥ 4.2	N/mm ²
E-Modulus	≥ 6000	≥ 2200	N/mm ²

Overview panels load bearing strength acc. to EN 12825

(Raw panel testing grid 600x600mm, safety factor 2, deflection class A, test of the bearing strength on massive steel cylinder supports)

Raised access floor panel	Naming acc. to EN 15283-2	Thickness [mm]	Working load [N]	Ultimate load [N]	Load class	
GIFAfloor DB28 U	GF-W1/606/606/28-C1/VK	28	1000	≥2000	none	to be installed only with additional reinforcement
GIFAfloor DB30 U	GF-W1/606/606/30-C1/VK	30	1200	≥2400	none	
GIFAfloor DB20	GF-W1DIR1/606/606/20-C1/VK	20	1000	≥2000	none	only for use as bearing panels for application of natural stone with sufficient textural strength
GIFAfloor DB22	GF-W1DIR1/606/606/22-C1/VK	22	1200	≥2400	none	
GIFAfloor DB25	GF-W1DIR1/606/606/25-C1/VK	25	1500	≥3300	none	
GIFAfloor DB28*	GF-W1DIR1/606/606/28-C1/VK	28	2000	≥4000	1	* Includes Hardbodytest acc. to EN 12825 ** Includes Softbodytest acc. to EN 12825
GIFAfloor DB30*	GF-W1DIR1/606/606/30-C1/VK	30	2200	≥4400	1	
GIFAfloor DB32*	GF-W1DIR1/606/606/32-C1/VK	32	2500	≥5000	1	
GIFAfloor DB34*	GF-W1DIR1/606/606/34-C1/VK	34	3000	≥6000	2	
GIFAfloor DB36*	GF-W1DIR1/606/606/36-C1/VK	36	3200	≥6400	2	
GIFAfloor DB38**	GF-W1DIR1/606/606/38-C1/VK	38	4000	≥8000	3	
GIFAfloor DB40**	GF-W1DIR1/606/606/40-C1/VK	40	4500	≥9000	4	
GIFAfloor DB42**	GF-W1DIR1/606/606/42-C1/VK	42	5000	≥10000	5	

Building physical material values

	GIFAfloor DB28 - DB42	GIFAfloor DB28 U GIFAfloor DB30 U	
Fire protection			
Building material class acc EN 13501-1	A1	A1	non-combustible
Building material class acc DIN 4102-1	A2	A2	non-combustible
Hygrothermal values			
Conductivity of heat λ_R	0.44	0.38	W/(mK)
For floor heating systems λ_{10}	0.30	-	W/(mK)
Value of vapour diffusion resistance μ	30 / 50	17	-
Specific heat capacity c	>1000	>1000	J/(kgK)
Thermal extension coefficient α	12.9x10 ⁻⁶	12.9x10 ⁻⁶	1/K
Expansion / shrinkage by rise / drop in temperature	≤0.02	≤0.02	mm/(mK)
Expansion / shrinkage by changing the rel. air humidity on 30% at 20°C	≤0.6	≤0.6	mm/m
Hygrothermal installation conditions (stationary)	+10° to +35°C	+10° to +35°C	c. 45-75% r.h.
Hygrothermal using conditions (stationary)	-10° to +35°C	+1° to +35°C	c. 35-75% r.h.
Surface water absorption capacity acc. to EN20535 (acc. Kopp)	<300	<300	g/m ²
Core remaining moisture	0.2 - 1.3	0.2 - 1.3	%
Other			
Electrostatic conductivity acc. to EN 1081	≥ 10 ⁷	-	Ω
Surfaces with transport protecting primer to bond dust and for reduction of water absorption capacity	yes	yes	-
ability of taking vertical dynamic maximum working load acc. to EN 13964 without additional treatment	≥ 100 000	-	endurance
Value of vapour diffusion resistance μ of the optional factory-made lamination of aluminum foil on the base side	9.6x10 ⁶	9.6x10 ⁶	practically vapour-tight

Overview fire protection classes acc. to DIN 4102-2

Raised access floor grid 600x600mm, construction according test reports

	Support height [mm]	Fire protection class
GIFAfloor DB 28 to GIFAfloor DB 40	≤ 1150	F 30 AB (tested from bottom side)
GIFAfloor DB 36 (to GIFAfloor DB 42)	≤ 214	F 60 AB (tested from bottom side)

Overview acoustical behavior (measurement acc. to EN ISO 140)

System	horizontal				vertical	
	Standardized flanking sound value difference $D_{n,f,w,P}$ [dB]		Weighted normalized flanking impact sound pressure level $L_{n,f,w,P}$ [dB]		Reduction in impact sound pressure level $\Delta L_{w,P}$ [dB]	
	without finish	with finish VM=26[dB]	without finish	with finish VM=26[dB]	without finish	with finish VM=26[dB]
GIFAfloor DB 28	52	54	63	40	19	35
GIFAfloor DB 30	-	-	-	-	-	-
GIFAfloor DB 32	53	52	62	40	19	33
GIFAfloor DB 34	50	51	64	41	19	32
GIFAfloor DB 36	49	49	68	43	17	33
GIFAfloor DB 38	-	-	-	-	-	-
GIFAfloor DB 40	-	-	-	-	-	-
GIFAfloor DB 42	-	-	-	-	-	-

Valuation of the eurofins emission test results

Cancerogene	after 3 and 28 days	not detectable
TVOC**	after 3 and 28 days	below the limit
SVOC***	after 28 days	below the limit
VOC*-value R	after 28 days	below the limit
VOC*-value without NIK-value	after 28 days	below the limit
Formaldehyde	after 28 days	below the limit

* VOC = volatile organic compounds ** TVOC = sum of the volatile organic substances

*** SVOC = sum of the less volatile organic substances



INSTITUT FÜR BAUBIOLOGIE ROSENHEIM GMBH

CERTIFICATE

Due to excellent test results we are pleased to grant

Knauf Integral KG

our approval of their products

Knauf Integral GIFAtec und GIFAfloor
in the density classes 1100 kg/m³ and 1500 kg/m³



granted by the Institute of Biology, Institut für Baubiologie Rosenheim GmbH

Reinert Hentschel
Reinert Hentschel
Rosenheim, March 2009

The Warranty has been granted for a period of 2 years.
Before the expiration renewed tests have to be applied for and carried out in the interest of the consumer.

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Certificate

On 25th of June 2004 Eurofins Danmark AIS received a sample of a fibre reinforced calcium sulphate panel with edge trim around the panel edges, panel thickness 28 mm, bare finish on top and bottom with the name

GIFAfloor
Knauf Integral KG

The emissions were tested according to the AgBB-scheme and guidelines of the DIBt (AgBB - Committee for Health-related Evaluation of Building Products, DIBt - German Institute for Building Technology). Sampling, testing and evaluation were performed according to EN 13419-1, EN 13419-3, ISO 16000-3, ISO 16000-6, ISO 16000-9, ISO 16000-11, ISO 16017-1 in the latest versions, see the test report no. 211019-71-161.

Evaluation of the test result according to AgBB guidelines:

- Carcinogenic substances were not detectable after 3 and after 28 days.
- The sum of VOC ("TVOC") after 3 days was below the limit of 10.000 µg/m³.
- The sum of VOC ("TVOC") after 28 days was below the limit of 1.000 µg/m³.
- The sum of SVOC after 28 day was below the limit of 100 µg/m³.
- After 28 days the value R was calculated from the detected VOC with single concentrations above 5µg/m³. This value R was below the limit of 1.
- The sum of VOC without LCI-value after 28 days was below the limit of 100 µg/m³.
- Formaldehyde after 28 days was below the limit of 120 µg/m³.

The tested product is suitable for indoor application, according to the AgBB guide line (version July 2004),
25th of August 2005


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General

Knauf Integral GIFAfloor DB are surface-primed cut panels for industrial further treatment for raised floor panels. The raw panels could be delivered with factory-made lamination of aluminum foil on the rear side on request. Basics of further treatment of wood are transferable for the further treatment of GIFAfloor DB.

Non-combustible GIFAfloor DB raised floor systems are installed in e.g. escape routes, assembly areas or high-rise buildings instead of combustible wooden systems. The strength of the material allows to use thinner panels than those made of other materials by fulfilling the same load bearing class.

All common attachments / fittings for raised floor panels e.g. electrical outlets could be installed into GIFAfloor DB raised floor panels. Protect GIFAfloor DB against water with suitable procedures.

Further treatment and installation

GIFAfloor DB material could be cut, shaped, drilled, sanded ... with usual machines for further treatment of wood processing.

Diamond tipped saw blades or milling heads to be used for further treatment of GIFAfloor DB with fast running machines, HM-tipped for slow running machines.

Cutting of the GIFAfloor DB panels on site with e.g. (hand-) circular saw with diamond-tipped saw blade and dust exhaustion system or with e.g. with a pendulum jigsaw / assembly band saw with a HM-tipped saw blade.

Prefabricate cut-outs or make cut-outs on site by using a router with a diamond-tipped milling head or a pendulum jigsaw with HM-tipped saw blade. Prime cut edges to bond dust.

Glueing, coating and covering

Knauf Integral GIFAfloor DB panels for industrial further treatment are primed at its surfaces with a special transport protecting primer and could be delivered with factory-made lamination of aluminum foil on the rear side on request. Cut edges have to be primed.

PUR glueing systems like Knauf Integral Nut-/Feder- Klebstoff or Knauf Integral Flächen- Klebstoff could be used depending on the field of application. Other glueing systems e.g. PVAC adhesives or hot melt adhesives to be tested for their suitability.

GIFAfloor DB in principle is suitable for any kind of floor finishing.

Soft floor finishing like e.g. carpet, soft PVC or linoleum to be fixed with a suitable adhesive on top side of the panels. HPL laminates or materials with equivalent behavior possibly have to be fixed additionally on back side of the panel as a counter draw.

Ceramic tiles and natural stone to be fixed with elastified glue system. The installation guides of the manufacturer of the glueing system especially for the sizes of the tiles and the minimum thickness of the adhesive have to be considered.

Fluid floor coverings like e.g. epoxy resin floors have to be elastified and water vapour permeable.

Pull-off strength to be tested for each type of connection.

Knauf Direct

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** 0.14 €/Min.

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