Note on English translation / Hinweise zur englischen Fassung
This is a translation of the technical data sheet valid in Germany.
All stated details and properties are in compliance with the regulations of the German standards and building regulations. They are only applicable for the specified products, system components, application rules, and construction details in connection with the specifications of the respective certificates and approvals.
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GKF - DIN 18180 DF - EN 520

Drywall Systems | 2012-02

Knauf Safeboard

the lead-free X-ray shielding board GKF for X-ray facilities

Product Description

- Board type
  DIN 18180 GKF
  EN 520 DF
- Colour of gypsum core: yellow
- Colour of board liner: ivory
- Back side marking: red

Order information
Board thickness 12.5 mm
- 2500x625 mm Material no. 00132849

Customized lengths on request

Storage
Store boards on wooden pallets in a dry environment.

Fields of Application

Knauf Safeboard sX-ray shielding boards are used for room-enclosing constructuions of X-ray facilities for radiation shielding.

Systems:
- X-Ray shield ceilings
- X-Ray shield partitions
- X-Ray shield furrings

Properties and Added Value

- Cost-effective X-ray protection
- Easy application
- Good coherence of structure when exposed to fire
- Non-combustible
- Concave and convex bending is possible
- Folding with mitring is possible
- Low expansion and shrinkage when climate conditions change

K762.de Knauf Safeboard

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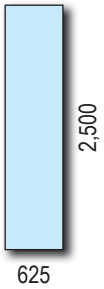
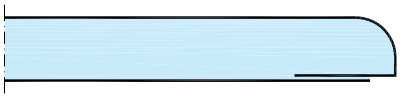
Technical Data

■ Board format (in mm):



■ Edge types

- Long edges with paper lining: **HRK**



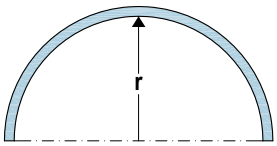
- Front edges: **SK**

■ Dimension tolerances acc. to EN 520:

- Width: +0 / -4 mm
- Length: +0 / -5 mm
- Thickness: +0.5 / -0.5 mm
- Angularity: ≤ 2.5 mm per m board width

■ Minimum bending radii

- Dry bending: r ≥ 2,750 mm
- Wet bending: r ≥ 1,000 mm



Board type:		GKF DF	DIN 18180 EN 520
Reaction to fire EN 13501-1:		A2-s1,d0 (B)	EN 520
Water vapour diffusion resistance μ:			EN ISO 10456
■ Dry		10	
■ Wet		4	
Thermal conductivity λ:	W/(m·K)	ca. 0.26	following EN 12664
Shrinkage and expansion			
■ per 1 % change of relative air humidity:	mm/m	0.005 - 0.008	
■ per 1 Kelvin change of temperature:	mm/m	0.013 - 0.02	
Density:	kg/m³	≥ 1,400	
Board weight:	kg/m²	ca. 17.8	
Flexural breaking load			DIN 18180
■ Board thickness 12.5 mm			
- Longitudinal direction:	N	≥ 610	
- Transverse direction:	N	≥ 210	
Max. limit for long term temperature exposure	°C	≤ 50 (short-term ≤ 60)	

	No. of boards	Total thickness mm	Tube voltage 60 kV	70 kV	80 kV	90 kV	100 kV	125 kV	150 kV
Lead equivalence [1] (mm Pb)	1	12.5	0.45	0.60	0.75	0.70	0.70	0.50	0.40
	2	25	0.90	1.20	1.50	1.40	1.40	1.00	0.80
	3	37.5	1.35	1.80	2.20	2.10	2.10	1.50	1.10
	4	50	1.80	2.30	2.90	2.80	2.80	2.00	1.40
	5	62.5					3.40	2.40	1.70
	6	75					4.00	2.80	2.00

[1] *Intermediate values can be interpolated linearly. Determination of lead equivalence acc. to DIN 6812.*
For mammography applications (35 kV) one layer of safeboard is sufficient for X-ray shielding.

Notes

Application

Application should be done acc. to the applicable standards and acc. to the Knauf Brochure ST02 „Knauf Safeboard".
Knauf Safeboard can be installed similarly to conventional gypsum boards. However, apply boards horizontally as cladding of partitions. If the boards are used as cladding of suspended ceilings, the max. axial spacing of the furring channels is reduced to 312.5 mm.

In order to avoid dust formation it is recommended to break the boards (score board liner with knife and break board along an edge, cut rear side board liner). Rework and bevel edges with Hand Rasp.
Use Knauf Diamant Screws XTN for fastening of the boards on metal or timber substructure.
Fill all joints (board joints and connections) with Safeboard Filler fully, i. e. continuously and over the entire cladding thickness of all Safeboard cladding layers (first filling run).

Safety notes

Wear a dust respirator (P2) when tooling Knauf Safeboards, particularly while sanding and sawing (e. g. with a hole saw).

Disposal

Waste code number (AVV code):
17 08 02
17 09 04

Knauf Direct
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** Fax: 0.14 €/Min. within the German landline network

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