

Knauf FireShield

Product Data Sheet (05/2025)



Knauf FireShield is designed for internal walls and ceilings requiring passive fire protection, providing fire resistance for up to 2 hours and additional noise reduction benefits.

PHYSICAL PROPERTIES		
Thickness and Nom. Weight :	13 mm	12 kg/m ²
	16 mm	14.8 kg/m ²
Length x Width :	1220 mm x 2440 mm	
Edge :	Tapered, Squared	
Color :	Pink face paper and brown back paper	

KEY FEATURES

- **Fire Resistant:** Offers up to 2 hours of fire protection integrity. Complies with **ASTM C1396**.
- **Provides additional fire resistance** over regular gypsum boards
- **Low VOC:** Emits less than 20 µg/m²-hr of TVOC for better indoor air quality, as tested per **ASTM D5116**
- **Manufactured in accordance with ASTM standards:**
 - ▶ **ASTM C1396** - Standard Specification for Gypsum Board
 - ▶ **ASTM E84** - Standard Test Method for Surface Burning Characteristics of Building Materials
 - ▶ **ASTM E1360** - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C.
 - ▶ **ASTM D5116** - Standard Test Method for Small-Scale Organic Emissions from Indoor Materials/Products
- **Environmental Safety:** Contains no hazardous substances; made using eco-friendly processes

APPLICATIONS

- High-rise and public buildings with stringent fire safety requirements
 - ▶ Educational institutions and high-end residences
 - ▶ Specific areas with fire hazard like kitchens

- New construction
- Repair & renovation construction
- Non-load bearing steel framed fire-rated walls and ceilings

Limitations:

- Avoid exposure to sustained temperatures exceeding 50 °C.
- Maximum framing spacing is 24" (610 mm) centers.
- Intended for interior applications only and must be kept dry during handling and storage. Please see Knauf installation guidelines.
- Wall cavities, floor cavities and other enclosed areas must be dry prior to being closed-up and application of interior finishing. Insulation in the wall or floor cavities must be dry.

DESIGN CONSIDERATIONS

- **Fire-Rated Walls:** FireShield partition and ceiling systems can comply with the fire resistance requirements of the Fire Code of the Philippines when joints and fasteners are properly spaced and taped to maintain structural integrity.
- **Structural Support:** Ensure any supporting structure has a fire-resistant rating equal to or greater than that of the wall or ceiling system, as per the Fire Resistance Level (FRL) requirements.

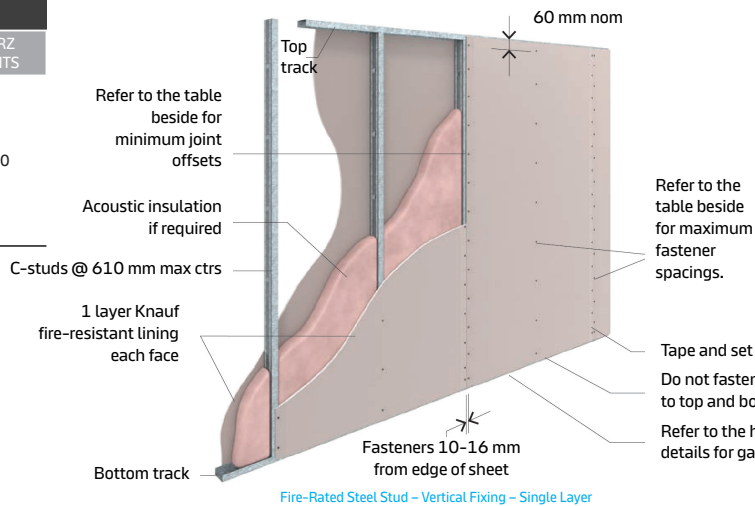
KNAUF PLASTERBOARD INSTALLATION SYSTEM

Proper fireproofing is essential for fire resistance and plasterboard longevity. Follow approved penetration details to ensure fire resistance integrity. See the [Systems+ Manual](#) for your detailed user guide.

- **Penetrations, abutments and junctions:** Seal fire-rated partition and ceiling openings and gaps with appropriate fire caulk.
- **Insulation and Integrity:** Use systems designed to deliver adequate insulation and integrity, with ratings such as FRL 120/120/120, indicating performance in load-carrying, integrity, and insulation criteria.
- **Direction of Fire Attack:** The direction of fire attack should be considered in selecting the applicable FireShield partition or ceiling system.
- **Jointing:** Finish board joints and screw heads using Knauf Premium Jointing or Premium Premix and paper tape to optimize fire resistance of fire rated partitions and ceilings.
 - ▶ Attach panels with the leading edge fixed to unsupported stud flanges, keeping vertical joints at least 200 mm from openings.
 - ▶ Place screws 10–16 mm from edges and ends, ensuring they are flush but do not tear the face paper.
 - ▶ Fasten screws no more than 200 mm apart on edges and 300 mm on the field.

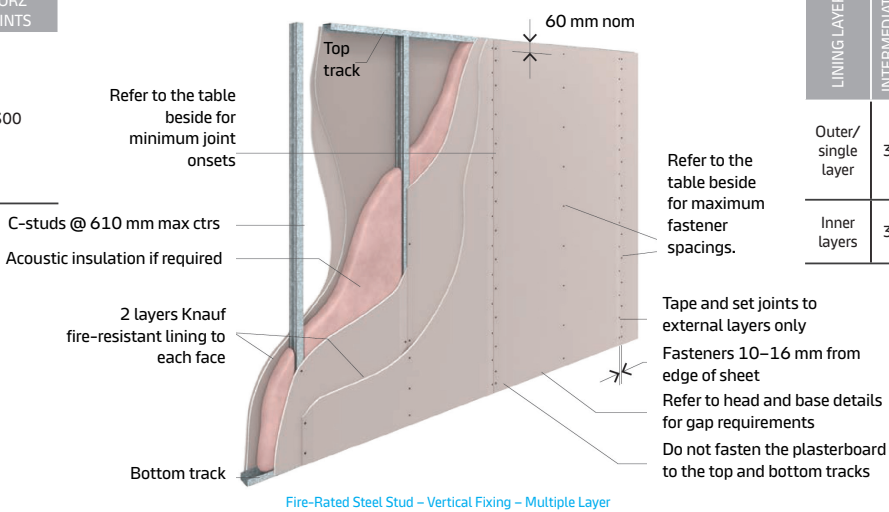


MIN JOINT OFFSETS (mm)		
LINING LAYER	VERT JOINTS	HORZ JOINTS
Inner/single layers on opposite sides or Adjacent layers on same side	One stud spacing (300 mm min.)	300



MAX SCREW SPACING (mm)			
LINING LAYER	INTERMEDIATE STUDS	VERTICAL EDGES	INT/EXT CORNERS & AROUND OPENINGS
Outer/single layer	300	200 (stagger screws in abutting sheets)	200
Inner layers	300	200	200

MIN JOINT OFFSETS (mm)		
LINING LAYER	VERT JOINTS	HORZ JOINTS
Inner/single layers on opposite sides or Adjacent layers on same side	One stud spacing (300 mm min.)	300



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Inner layers	300	200	200

PERFORMANCE

Knauf FireShield has undergone rigorous testing to ensure it meets high standards for performance and fire-resistance. Here's a summary of the test results along with the benefits of each aspect:

Test	Results	ASTM C1396 Requirement		Benefits
		13 mm	16 mm	
Flexural Strength – Longitudinal	Passed	> 493 N	> 205 N	Provides durability and resistance to bending forces, allowing the plasterboard to withstand structural loads and impacts without sagging or breaking
Flexural Strength – Transverse	Passed	> 654 N	> 654 N	
Hardness	Passed	> 347 N	> 49 N	Provides resistance to surface damage, helping walls maintain their appearance and integrity in high-traffic areas
Nail Pull Resistance	Passed	< 30 mm	> 387 N	Secures fastening of fixtures and fittings, preventing tearing and enhancing the stability of installations.
Humidified Deflection	Passed		< 16 mm	Helps maintain shape and structural integrity even in humid conditions, making it ideal for use in moisture-prone areas like kitchens and bathrooms

*Knauf gypsum boards are manufactured in accordance with ASTM C1396



System Type	Fire Resistance	Description
Single-Layer System	Up to 64 minutes	Provides fire resistance of up to 64 minutes when used as a system
Double-Layer System	Up to 138 minutes	Provides fire resistance of up to 138 minutes when used as a system

GENERAL HANDLING TIPS

- Always use Personal Protective Equipment (PPE) during handling.
- To safely carry a gypsum board, two people should hold it at both ends.
- The gypsum board should rest on the carriers' shoulders while being carried.
- Use both feet to turn instead of twisting your waist or back.
- Ensure gypsum boards are securely positioned on pallets.

UNLOADING WITHOUT FORKLIFT TRUCKS

- A minimum of two people is required to manually unload the gypsum boards.
- One person must remain inside the truck to hand over the boards to the others on the ground.
- While carrying gypsum boards, ensure they rest on the carriers' shoulders.

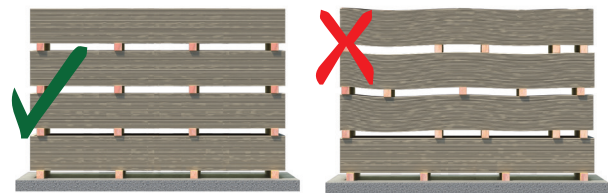
UNLOADING USING FORKLIFT TRUCKS

- Use a forklift truck with a minimum capacity of 3.5 tons to unload gypsum boards from the delivery truck.
- The unloading should be performed by a certified forklift operator.
- Position the forklift's "forks" between the billets. Secure proper placement of the boards to avoid accidents.
- Prepare billets in the desired storage location beforehand.

PROPER STORAGE

- Store gypsum boards in a covered area, free from water leaks and excessive moisture. Boards should be kept in neat, flat stacks off the ground to prevent sagging and minimize damage to edges and surfaces.
- Position billets at right angles to the gypsum boards, with stacking supports spaced no more than 600 mm apart. Use five evenly spaced billets.
- The length of the billets should match the length of the gypsum board to properly support its weight.
- Gypsum boards can be stacked up to a maximum of five layers, with the following maximum number of sheets per layer:

13 mm - 70 sheets
 16 mm - 58 sheets



Submittal Sheet

PROJECT INFORMATION	
Project Name	
Project Location	
Contractor Name	
Date of Submission	

REVIEW AND APPROVAL SECTION				
Reviewer Name and Signature				
Product Name	Approved	With Revisions	Rejected	For Further Deliberation
FOR INTERIOR				
<i>Gypsum Boards</i>				
StandardShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SpanShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MoistureShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FireShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DenseShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MultiShield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EchoStop	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Compounds & Finishing</i>				
Premium Jointing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Premium Premix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paper Tape	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FOR EXTERIOR				
<i>Cement Board</i>				
Aquapanel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes				

