

KNAUF

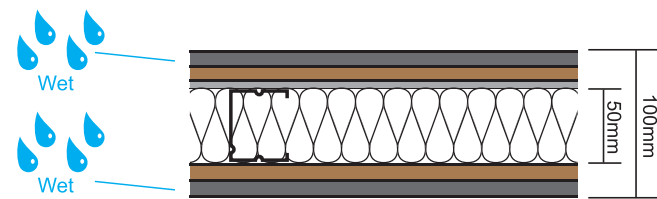
AQUAPANEL®

DENSESHIELD



**High Performance Drywall Solutions
for Wet & Dry Areas**

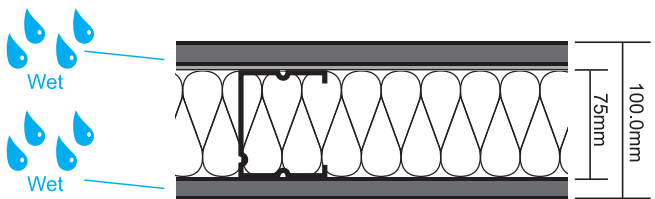
2 hrs FRP STC 53



100mm Knauf Drywall Partition System

Face layer	: 12.5mm Knauf Aquapanel
Base layer	: 12.5mm Knauf Denseshield
Metal Stud	: 50mm Metal Stud
Acoustic Infill	: 50mm Rockwool (60kg/m ³)
Base layer	: 12.5mm Knauf Denseshield
Face layer	: 12.5mm Knauf Aquapanel

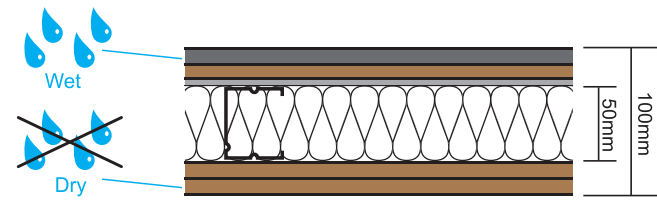
1 hr FRP STC 43



100mm Knauf Drywall Partition System

Face layer	: 12.5mm Knauf Aquapanel
Metal Stud	: 75mm Metal Stud
Acoustic Infill	: 50mm Rockwool (100kg/m ³)
Face layer	: 12.5mm Knauf Aquapanel

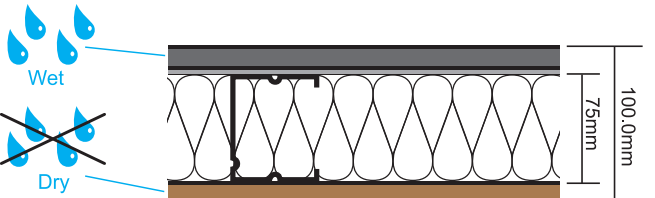
2 hrs FRP STC 54



100mm Knauf Drywall Partition System

Face layer	: 12.5mm Knauf Aquapanel
Base layer	: 12.5mm Knauf Denseshield
Metal Stud	: 50mm Metal Stud
Acoustic Infill	: 50mm Rockwool (60kg/m ³)
Base layer	: 12.5mm Knauf Denseshield
Face layer	: 12.5mm Knauf Denseshield

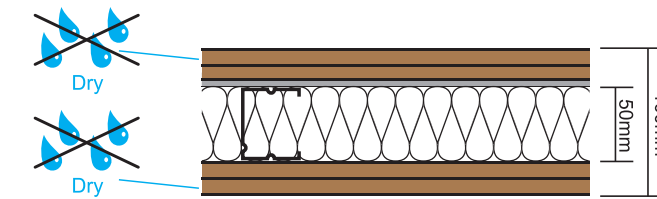
1 hr FRP STC 46



100mm Knauf Drywall Partition System

Face layer	: 12.5mm Knauf Aquapanel
Metal Stud	: 75mm Metal Stud
Acoustic Infill	: 50mm Rockwool (100kg/m ³)
Face layer	: 12.5mm Knauf Denseshield

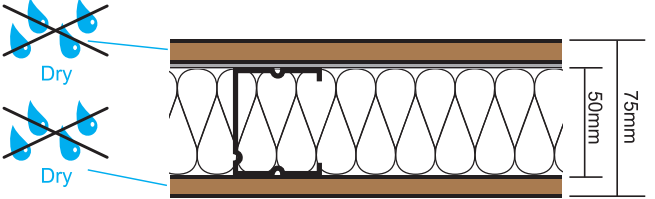
2 hrs FRP STC 55



100mm Knauf Drywall Partition System

Face layer	: 12.5mm Knauf Denseshield
Base layer	: 12.5mm Knauf Denseshield
Metal Stud	: min 50mm Metal Stud (Ref to P.3)
Acoustic Infill	: 50mm Rockwool (60kg/m ³)
Base layer	: 12.5mm Knauf Denseshield
Face layer	: 12.5mm Knauf Denseshield

1 hr FRP STC 46



75mm Knauf Drywall Partition System

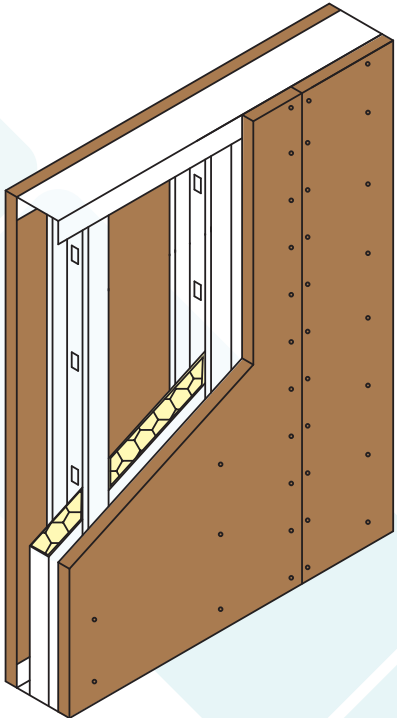
Face layer	: 12.5mm Knauf Denseshield
Metal Stud	: min 50mm Metal Stud (Ref to P.3)
Acoustic Infill	: 50mm Rockwool (60kg/m ³)
Face layer	: 12.5mm Knauf Denseshield

DENSESHIELD + AQUAPANEL® DRYWALL SYSTEM

KNAUF DENSESHIELD IMPACT RESISTANT PARTITION SYSTEM meeting “Heavy Duty” criteria of BS5234: Part 2: 1992

Technical Data:
1-Hour fire rating, integrity & insulation
according to BS476: Part22, with fire risk from both sides
Overall partition thickness = 75mm
Sound reduction Rw = 46 dB

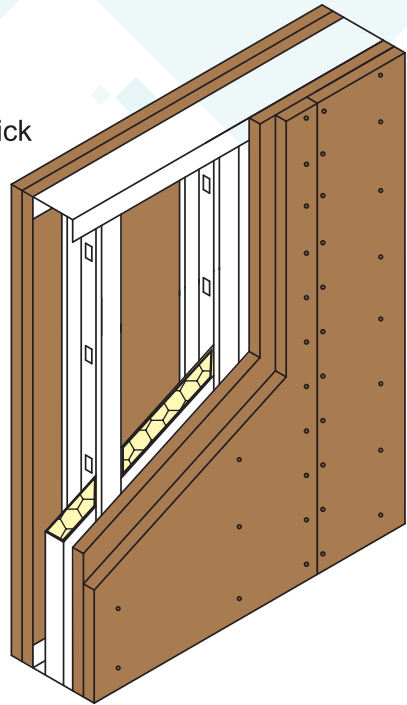
- 1. KNAUF Denseshield impact resistant fire rated plasterboard 12.5mm thick
- 2.KNAUF 50mm x 50mm x 0.6mm G.I. stud at 610mm centres
 - * **When 75mm wide frame is used, this Denseshield partition meets the 'Heavy Duty' criteria of BS5234;Part2:1992**
- 3. KNAUF 50mm x 35mm x 0.6mm G.I. 'U' channel
- 4. Nailable plug at 500mm centres
- 5. Knauf intumescent and acoustic sealant
- 6. Drywall screw at 200-400mm centres
- 7. 50mm thick, 60kg/cu.m, KNAUF rockwool








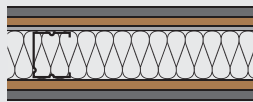
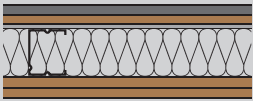
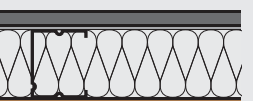

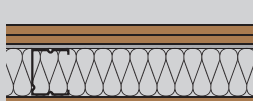
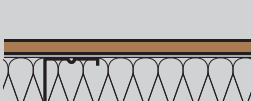


KNAUF DENSESHIELD IMPACT RESISTANT PARTITION SYSTEM meeting “Severe Duty” criteria of BS5234: Part 2: 1992

Technical Data:
2-Hour Fire rating, integrity & insulation
according to BS476: Part22, with fire risk from both sides
Overall partition thickness = 125mm
* Sound reduction Rw = 55 dB

- 1. KNAUF Denseshield impact resistant fire rated plasterboard 2x12.5mm thick
- 2. KNAUF 75mm x 50mm x 0.6mm G.I. stud at 610mm centres
- 3. KNAUF 75mm x 35mm x 0.6mm G.I. 'U' channel
- 4. Nailable plug at 500mm centres
- 5. Knauf intumescent and acoustic sealant
- 6. Drywall screw at 200-400mm centres
- 7. 50mm thick, 60kg/cu.m, KNAUF rockwool



Scheme Drawing	 FIRE RATING BS476 OART 22	 STC	 THICKNESS (mm)	 WEIGHT (kg/m²)	 FRAME (mm)	 INUSLATION (Rockwood)	 Water Proof
	120	53	100	63	50x50x0.6	60kg/50mm	both side
	120	54	100	63			one side
	60	46	100	36	75x50x0.6	100kg/50mm	both side
	60	43	100	36			one side
	120	55	100	63	50x50x0.6	60kg/50mm	NO
	60	46	75	36			NO

AQUAPANEL®

KNAUF INTERIOR SOLUTIONS – KNAUF Interior cement board is designed as an ideal solution for humid and wet areas, it's 100% water-resistant and completely mould and mildew free.

It's able to withstand extreme humidity without softening or swelling and is the material of choice particularly for demanding applications such as swimming pools and saunas. Our interior solutions are suitable for a range of applications, from new building construction through to renovation projects. Public spaces such as hotels, sports facilities, hospitals, and residential areas can all benefit from Knauf Wetroom Solutions

Key Advantages of Knauf Interior KNAUF AQUAPANEL® Solutions

- 100% water-resistant and dimensionally stable. These solutions are even suitable for environments such as swimming pools with corrosive chlorine and high humidity.
 - Extreme temperature resistance, making it ideal for wellness centers and saunas.
 - High impact resistance and sound insulation. It's the solution that's perfect for applications such as sports halls and schools, due to high rigidity and strength.
- A wall that stays clean and hygienic. Not even intense chemical agents will make it soften.
 - AQUAPANEL® walls can be built with curved shapes to create convex or concave areas.

KNAUF INTERIOR SOLUTIONS with AQUAPANEL® Technology Inside are the tried and tested solution for design innovation without risk.

PHYSICAL PROPERTIES	
Length (mm)	2400
Width (mm)	1200
Thickness (mm)	12.5
Min. bending radius for 1200 mm wide board	1
Weight (kg/m²)	approx. 15
Dry bulk density (kg/m³) according to EN 12647	approx. 1050
Bending strength (MPa) according to EN 12647	8.75
Tensile strength perpendicular to the plane of the board (N/mm²)	0.49
according to EN 319	
Shearing strength (N) according to EN 520	696
pH-value	12
Thermal conductivity (W/mK) according to EN ISO 10456	0.35
Thermal expansion (10 ⁻⁶ K ⁻¹)	7
Water vapour diffusion resistance μ (-) according to EN ISO 12572	50
Length variation 65% - 85% humidity (mm/m) according to EN 318	0.25
Thickness variation 65% - 85% humidity (%) according to EN 318	0.1
Building material class according to EN 13501	A1 non-combustible

KNAUF DENSESHIELD

KNAUF Denseshield is a specially formulated high performance plasterboard with additional toughness, impact resistance and durability, and is usually used for partitions, separating walls, lift and staircase enclosures and other high traffic areas.

KNAUF Denseshield achieves greater resistance to surface indentation and penetration through its high density gypsum core which is encased in heavy face paper (mustard colour) and strong liner paper on the back side. In structure and texture, the board is rather reminiscent of a canvas that could take on a great variety of appearances and colours you wish to have on the palette.

Summary of strength and robustness tests to BS5234: Part 2: 1992 (Details of partition specimen and test report are attached)				
Tests for grade compliance				
Requirements tested	Grade performance achieved Pass/Fail			
	LD	MD	HD	SD
Stiffness	–	–	–	Passed
Surface damage by small hard body impact: ¹				
Straight partition	–	–	Tested*	–
Right angle partition	–	–	Tested*	–
Surface damage by large soft body impact: ¹				
Straight partition	–	–	Passed	–
Right angle partition	–	–	Passed	–
Perforation by small hard body impact: ¹				
Straight partition			Passed	
Right angle partition			Passed	
Resistance to structural damage by large soft body impact	–	Passed	–	–
Door slamming	–	–	–	Passed

PROPERTIES	KNAUF DENSESHIELD
Neutral designation	Calcium Sulphate Asbestos free
Material class	Type 5 Acc. To BS1230: Part 1
Surface spread of flame	Class 1 to BS476: Part 7
Building regulations classification	Class 0 to BS476: Part 6
Raw density	Approx. 950 kg/cu. m.
Thermal conductivity	Approx. 0.24W/mk
Coefficient of expansion	2 0 x 10 ⁻⁵ m/mk
Diffusion Resistance Factor	Approx. 10
Water Absorption Capacity	0.40g/cu. cm
Expansion when underwater (100% saturation)	3.80mm/m
Alkaimity	Approx. 7.0
Modulus of elasticity E	
Face side diagonal	5500 N/sq. mm.
Rear side parallel	5400 N/sq. mm.
Flexural strength F	
Face side diagonal	8 N/sq. mm.
Rear side parallel	5.3 N/sq. mm.
Compressive strength	20.85 N/sq. mm.
Board sizes	1220 x 2440 x 12.5mm
Edge detail	Taper

Product profile:

Knauf boards offer superior performance meeting almost all performance requirements likely to be encountered in any building type or location.

The Knauf range includes:

- High Performance Fire Protection Boards (Superpanel)
 - Up to four hours fire protection
 - Superior impact resistance
- Aquapanel Cement Board Outdoor
 - No loss of strength when wet
 - External cladding
- Denseshield
 - A high impact plaster board for any high traffic areas.
- Insulations
 - Rockwool
- Accessories
 - Steel Stud/channel
 - Paper Tape
 - Screw

No asbestos content in all Knauf boards



Knauf-The Company

World leader in building product technology

Drawing from over 80 years' experience, Knauf, a major international building products group, have secured leading status in the field of gypsum and cement technology.

Leadership has been won by a combination of specialist expertise, a deep understanding of customer needs, and a record of pioneering achievement.

Knauf systems have been installed for many years both in the H.K. and around the world with proven success.

Products

- Plasterboards
- Plasters
- High Performance Fire Protection Board
- High Performance Building Boards
- Jointing compounds
- Drywall and ceiling accessories

Systems

- Wall linings
- Commercial Partitions
- Domestic Partitions
- Acoustic Ceilings
- Lift and stair enclosures
- Fire protection wall linings, partitions and ceilings

HONG KONG OFFICE:

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Knauf- The Responsibility

Single Source Responsibility

To ensure our clients get the best out of Knauf products, Knauf would offer system performance guarantee which goes hand in hand with our "Single Source Responsibility" strategy. Knauf supplies and guarantees the whole system.

KNAUF has a policy of continuous improvement and reserves the right to change specifications, designs and products at any time without prior notice.

E-MAIL: enquiry@knauf.com.hk

WEBSITE: www.knauf.com