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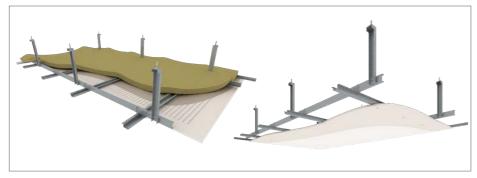
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ENSEMBLE™ ACOUSTICAL PLASTERBOARD CEILING





FEATURES & BENEFITS

- Up to NRC 0.90
- Surface burning as per BS 476: Part 7: Class one surface spread of flame
- Fire propagation as per BS 476: Part 6: Fire propagation index, I = 5.0
- Non-directional, monolithic appearance with fine texture
- Special acoustical perforated USG Ensemble[™] Panels to optimize sound performance
- VOC <0.1 mg/m²/hr (ASTM D5116)
- High light-reflective finish (LR-.85) reduces fixture and energy use
- Acoustically transparent spray-applied finish

DESCRIPTION

USG Ensemble™ Acoustical Plasterboard Ceiling offers the seamless look of plasterboard with true acoustical performance up-to 0.9 NRC. Installation is similar to standard plasterboard and plasterboard suspension systems.

USG Ensemble™ Ceiling Panels are highly engineered gypsum panels that perform like acoustical ceiling panels. The Ensemble™ board perforation pattern is 12mm round holes with 20% open area.

SYSTEM SUMMARY

	USG Ensemble™ Acoustical Plasterboard Ceiling		
Framing	USG Middle East Suspension System		
Application	Lobbies, atriums, museums, executive or boardrooms, conference rooms		
Performance	Mass	≈ 6.7kg/m²	
	Acoustic rating	Up to NRC 0.9	
	Light reflectance	0.8	
	Fire Hazard properties	Fire propagation index, I = 5.0 (BS 476 Part 6) Surface spread of flame = Class One (BS 476 Part 7)	
	Finish	Standard White, other RAL colors are available upon request Seamless, and spray-applied fine texture with low VOC-emitting material	
Specification	Board Size	1200x2400x12.5mm	
	Framing	USG Suspension System	
	Insulation	Glass Wool 90mm-thick 14kg/m³ or Stone Wool 50mm-thick 40kg/m³	
	Fastener	25mm Type "S" Needle Point Screws	
	Joint Tape	USG Sheetrock® Brand Paper Joint Tape	
	Joint Compound	1st and 2nd Coat : Sheetrock® All Purpose Joint Compound or USG Premium Premix 3rd Coat : Sheetrock® Lightweight All-Purpose Joint Compound	
	Final Finish	USG Ensemble™ Spray-Applied Finish	
Acoustic Performance	0.9 NRC	Insulation: Stone Wool 50mm thick, 40 kg/m³ 100mm Suspension mounting from plenum	
	0.9 NRC	Insulation: Glass Wool 90mm thick, 14kg/m ³ 100mm Suspension mounting from plenum	
	0.7 NRC	No Insulation, 200mm Suspension mounting from plenum	
	0.6 NRC	No Insulation, 400mm Suspension mounting from plenum	
Warranty			

SYSTEM MATERIALS • Wall Angle

- Angle Bracket
- 3.75mm Suspension Rod
- Butterfly clip
- Primary channel bracket
- Primary channel
- Furring channel
- Wire Connecting Clip
- 50mm-thick 40kg/m³ Stone Wool or 90mm-thick 14kg/m³ glass wool
- USG Ensemble[™] Ceiling Panels
- USG Sheetrock® Brand Paper Joint Tape
- USG Sheetrock® All Purpose Joint Compound
- USG Sheetrock® Lightweight All Purpose Joint Compound
- USG Ensemble[™] Spray-Applied Finish

SUSPENSION SYSTEM



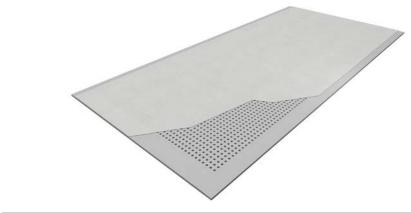
INSULATION

Place either:

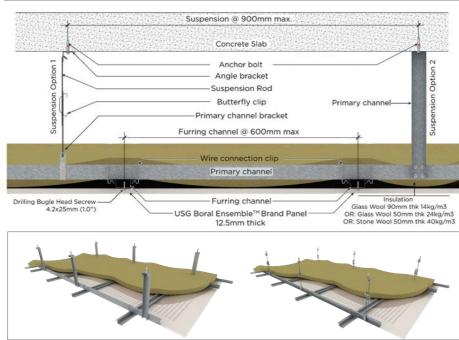
90mm-thick 14kg/m³ glass wool or 50mm-thick 40kg/m³ stone wool

Insulation on top of USG Ensemble™ Brand Panels, ensure no gaps and/or crushing of the insulation.

LINING USG Ensemble™ Ceiling Panels 12.5mm-thick, 1200mm-wide, and 2400mm in length, with tapered edges as supplied by USG. To be identified by a translucent veil on the front facer and a translucent veil on the back facer, as well as a R12-1 pattern with no band and having 20% perforation ratio on the board surface.



SYSTEM ILLUSTRATION

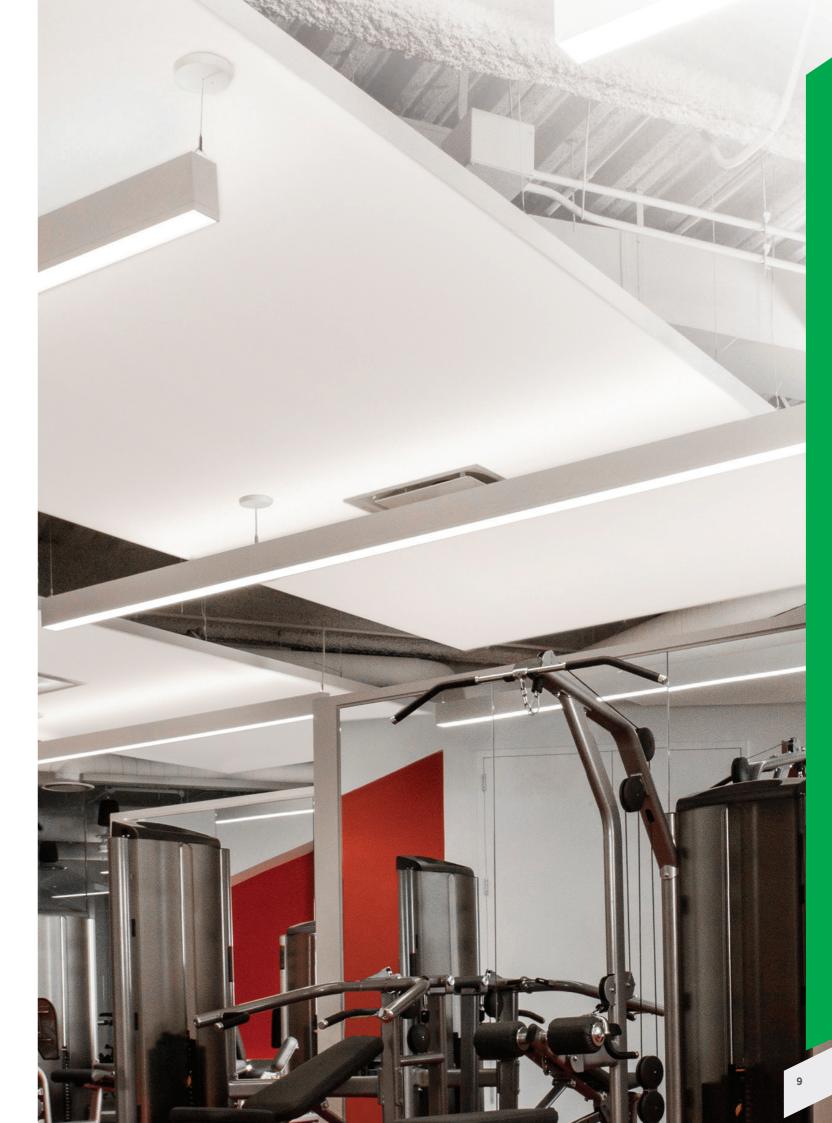


INSTALLATION

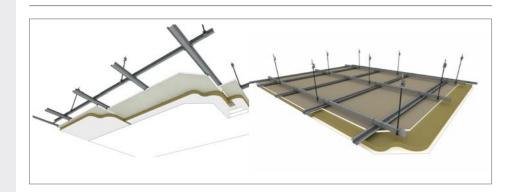
USG Ensemble™ Monolithic Acoustical Ceiling System consist of USG Ensemble™ Brand Panels 12.5mm thick screw fixed staggered onto USG Dry Wall ceiling system. Spacing of Primary Channel at 900mm centers max., Furring Channel at 600mm centers max., Suspension Bracket to connect rod and Main Channel fastened to the Primary Channel. 90mm-thick 14kg/m³ glass wool or 50mm-thick 40kg/m³ stone wool insulation with back fleece placed on top of panels, board joints to be flush finished using USG Paper Tape 50mm width and Sheetrock® All Purpose Joint Compound or USG Premium Premix (1st and 2nd coat) and Sheetrock® Lightweight All-Purpose Joint Compound (3rd coat) jointing compound.

All board surface to be final finished with 2 – 3mm thick USG Ensemble Spray Applied Finish, all fixed in accordance to manufacturer's instruction and recommendation.

Contact USG Middle East nearest sales office for full installation support and inspection.



MONOSILENT ACOUSTICAL PLASTERBOARD CEILING



FEATURES & BENEFITS

- Up to 0.95 NRC and 43 CAC
- Class A Fire Rating
- Surface burning as per BS 476: Part 7: Class one surface spread of flame
- High light-reflective finish (LR-.85) reduces fixture and energy use
- Acoustically transparent spray-applied finish

DESCRIPTION

USG Middle East Acoustical System Monolithic Acoustical Ceiling System is a lightweight, non-combustible, high acoustic seamless ceiling system consist of USG Middle East 12.5mm thick screw fixed to frame system and finished using USG Middle East paint Spray Applied Finish.

INTENDED FOR

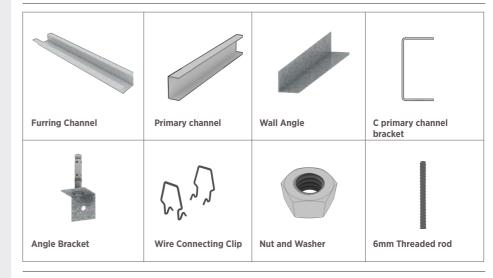
Lobbies, atriums, museums, executive/board rooms, conference rooms, Corridors

SYSTEM SUMMARY

	Mono Silent Acoustical Ceiling System		
Mass	12 kg/m²	12 kg/m ²	
Acoustic Rating	NRC 0.95 and CAC 43		
Insulation	Fiberglass 38mm thick 100	0 kg/m³, 1200*2400 mm	
Light Reflectance	0.85		
Fire Rated	Class A		
Finish	White, seamless, spray-applied fine texture with low VOC- emitting material		
Specification	Framing USG Middle East Primary Channel		
		USG Middle East Furring Channel	
		USG Middle East Connecting clip	
		USG Middle East Primary C Bracket	
		USG Middle East Suspension Rod	
	Lining	USG Middle East Standard Board Panels 12.5mm thick	
	Insulation	Fiberglass 38mm thick 100 kg/m³	
	Joint Tape	USG Middle East Paper Tape 50mm width	
	Joint Compound	USG sheetrock All Propose joint Compound	
	Final Finish	Latex spray painting	
Warranty	To ensure the performance of this system meets the USG ME Warranty requirements, only USG ME products are to be used and installed in accordance with USG ME specification and recommendations.		

Remarks: To ensure the performance of this system meets the USG Middle East Warranty requirements, only USG Middle East products are to be used and installed correctly in accordance to USG Middle East specification and recommendations.

MATERIALS



LININ

USG Middle East Plasterboard 12.5 mm Standard Core, 1200mm wide and 2400mm length, tapered edges as supplied by USG Middle East.

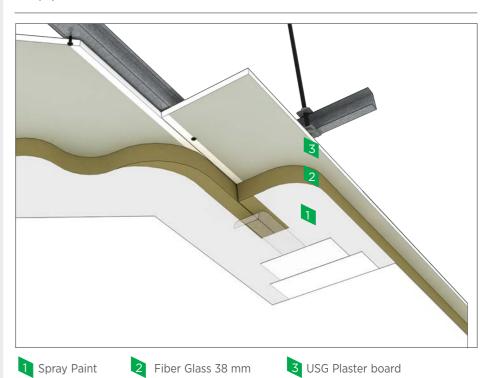
INSTALLATION

Fiberglass 38 mm thickness, 100 kg/m³ density. Dimension 1200*2400 mm installed on USG Middle East plasterboard by glow. Contact USG Middle East nearest sales full installation support and inspection.

Contact USG Middle East nearest sales office for full installation support and inspection.

JOINTING SYSTEM

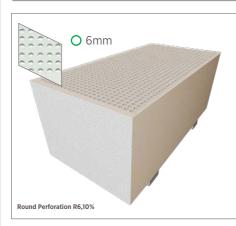
To achieve Level 4 finish by using USG Middle East three coat jointing system; on the edge of fiberglass board, use USG Middle East 50mm paper tape together with 1st and 2nd coat; and 3rd coat using USG Middle East sheetrock All Purpose Joint Compound. When thoroughly dry, when thoroughly dry, sand lightly to a smooth finish using 180 grit sandpaper. All coats must be finished to the correct finished width.

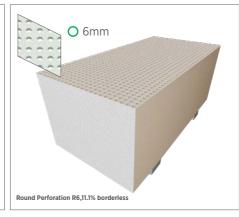


FINAL FINISH

Fiberglass surface to be finished with USG painting Spray Applied Finish spray onto board surface using; Pumping System for Texture Spraying. With 4mm nozzle, spray 4 Coats cross hatched in opposite direction with 50% overlap to achieve smooth finish.

ROUND PERFORATION R6.10% ROUND PERFORATION R6.11.1% BORDERLESS





FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve Up-to 0.85 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread.
- Available in borderless perforations pattern for seamless appearance to increase the ceiling aesthetic.

DESCRIPTION

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R6 is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound.

The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back.

These Acoustical Gypsum Board are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- Libraries and hospitals

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50 °C.
 - 2. Intended for interior applications only and must be kept dry during handling and
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing.
 - 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
 - 6. 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.
 - 7. Back-blocking is recommended for areas with critical light exposure.
 - 8. Must be stored off the ground and under cover.

FINISHING AND DECORATING

It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, jointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

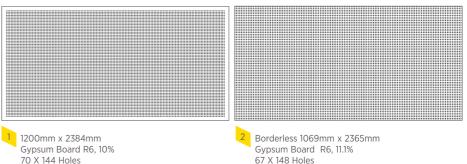
For Priming and decorating with paint, USG recommends using roller applications. Roller application ensures a uniform texture over the entire surface and protects the non-woven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	R6, 10% ¹	R6, 11.1% Borderless ²
Weight (kg/m²)	6.75 kg/m ²	6.65 kg/m ²
Density	600 kg/m ³	600 kg/m ³
Thickness	12.5 mm	12.5 mm
Actual Board Length	2384 mm	2365 mm
Actual Board Width	1200 mm	1069 mm
Hole Type	Round	Round
Hole Diameter	6 mm	6 mm
Border	45 mm	Borderless
Pitch (Holes Spacing Center to Center)	16 mm	16 mm
Layout	One Group 70 X 144 Holes	One Group 67 X 148 Holes
Perforation Rate (%)	10%	11.1%
Noise Reduction Coefficient (NRC)	0.7	0.7
Noise Reduction Coefficient (NRC*) with Insulation	0.85	0.85
*Insulation (Ontional) 24kg/m³ 75mm glass wool		A

Insulation (Optional) 24kg/m³, 75mm glass woo



ADVANTAGES

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic design Requirements.

Acoustic Performance: Superior NRC Capabilities up-to 0.85.

Easy to Install: Scores and snaps easily. Similar installation to conventional Plasterboard.

COMPLIANCE

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R6

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread

ROUND PERFORATION R10,16.6%







FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve 0.70 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread.

DESCRIPTION

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R10,16.6% is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound.

The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back.

These Acoustical Gypsum Boards are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- Libraries and hospitals

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50 °C.
 - 2. Intended for interior applications only and must be kept dry during handling and
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing.
 - 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
 - 6. 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.
 - 7. Back-blocking is recommended for areas with critical light exposure.
 - 8. Must be stored off the ground and under cover.

DECORATING

FINISHING AND It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, jointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

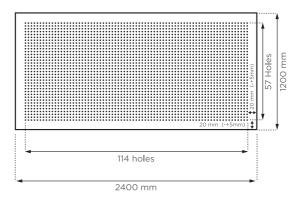
For Priming and decorating with paint, USG recommends using roller applications, Roller application ensures a uniform texture over the entire surface and protects the nonwoven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	R10,16.6%
Weight (kg/m²)	9
Thickness (mm)	12.5
Length (mm)	2400
Width (mm)	1200
Hole Type	Round
Hole Diameter(mm)	10
Pitch (center to center spacing between holes){mm}	21
Halls Layout	114x57
Layout Drawing	As per the below drawing
Perforation Rate (%)	16.6%
Noise Reduction Coefficient (NRC*)	0.70
Mounting	E-400
*Inaulation (Ontional) 14kg/pg3 glass wool	

^{*}Insulation (Optional) 14kg/m³ glass wool



ADVANTAGES

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic and acoustic design requirements

Acoustic Performance: Superior NRC capabilities up-to 0.70

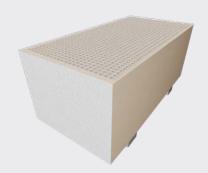
Easy to Install: Scores and snaps easily. Similar installation to conventional plasterboard

COMPLIANCE

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R10,16.6% Comply with:

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread

ROUND PERFORATION R15,16.2%





FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve 0.70 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread

DESCRIPTION

Skyrock Ecoblock Acoustical Gypsum board R15,16.2% is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound. The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back. These Acoustical Gypsum Boards are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- · Libraries and hospitals

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50 °C.
 - 2. Intended for interior applications only and must be kept dry during handling and
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing.
 - 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
 - 6. 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.
 - 7. Back-blocking is recommended for areas with critical light exposure.
 - 8. Must be stored off the ground and under cover.

FINISHING AND DECORATING

It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, jointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

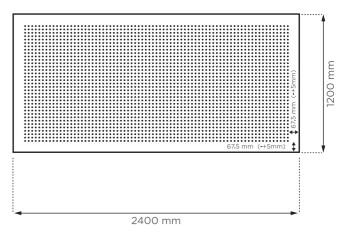
For Priming and decorating with paint, USG recommends using roller applications. Roller application ensures a uniform texture over the entire surface and protects the non-woven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	R15,16.2%
Weight (kg/m²)	9
Thickness (mm)	12.5
Length (mm)	2400
Width (mm)	1200
Hole Type	Round
Hole Diameter (mm)	15
Pitch (center to center spacing between holes){mm}	30
Border (mm)	67.5
Layout Drawing	As per the below drawing
Perforation Rate (%)	16.2% with black acoustic tissue at the back
Noise Reduction Coefficient (NRC*)	0.70
Mounting	E-400
*Insulation (Optional) 1/1/a/m³ alass wool	

^{*}Insulation (Optional) 14kg/m³ glass wool



ADVANTAGES

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic and acoustic design requirements

Acoustic Performance: Superior NRC capabilities up-to 0.70

Easy to Install: Scores and snaps easily. Similar installation to conventional plasterboard

COMPLIANCE

Skyrock Ecoblock Acoustic Plasterboard Round Perforation R15,16.2% Comply with:

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread

ROUND PERFORATION R8/15/20, 9.9%





FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve 0.65 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R8/15/20, 9.9% is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound.

The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back.

These Acoustical Gypsum Board are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- Libraries and hospitals

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50 °C.
 - 2. Intended for interior applications only and must be kept dry during handling and storage.
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing.
 - 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
 - 6. 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.
 - 7. Back-blocking is recommended for areas with critical light exposure.
 - 8. Must be stored off the ground and under cover.

FINISHING AND **DECORATING**

It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, iointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

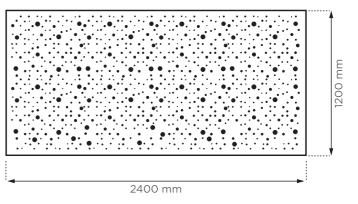
For Priming and decorating with paint, USG recommends using roller applications. Roller application ensures a uniform texture over the entire surface and protects the nonwoven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	R8/15/20, 9.9%
Weight (kg/m²)	9.1
Thickness (mm)	12.5
Length (mm)	2400
Width (mm)	1200
Hole Type	Round
Hole Diameter (mm)	8, 15, 20
Layout Drawing	As per the below drawing
Perforation Rate (%)	9.9% with black acoustic tissue at the back
Noise Reduction Coefficient (NRC*)	0.65
Mounting	E-400
*!!-ti (O-ti!) 14!!3 -!!	

^{*}Insulation (Optional) 14kg/m³ glass wool



ADVANTAGES

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic and acoustic design requirements

Acoustic Performance: Superior NRC capabilities up-to 0.65

Easy to Install: Scores and snaps easily. Similar installation to conventional plasterboard

COMPLIANCE

Skyrock Ecoblock Acoustical Gypsum Board Round Perforation R8/15/20, 9.9% comply

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread

SQUARE PERFORATION Q10,21.4%





FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve 0.70 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread

Skyrock Ecoblock Acoustical Gypsum board Square Perforation Q10,21.4% is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound.

The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back.

These Acoustical Gypsum Board are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- Libraries and hospitals

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50 °C.
 - 2. Intended for interior applications only and must be kept dry during handling and storage.
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing/
 - 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
 - 6. 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
 - 7. Back-blocking is recommended for areas with critical light exposure.
 - 8. Must be stored off the ground and under cover.

FINISHING AND DECORATING

It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, jointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

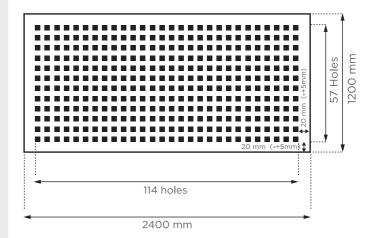
For Priming and decorating with paint, USG recommends using roller applications. Roller application ensures a uniform texture over the entire surface and protects the non-woven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	Q10,21.4%
Weight (kg/m²)	9
Thickness (mm)	12.5
Length (mm)	2400
Width (mm)	1200
Hole Type	Square
Hole Diameter (mm)	10
Pitch (center to center spacing between holes){mm}	21
Halls layout	114 x 57
Layout Drawing	As per the below drawing
Perforation Rate (%)	21.4%
Noise Reduction Coefficient (NRC*)	0.70
Mounting	E-400
	T

^{*}Insulation (Optional) 14kg/m³ glass wool



ADVANTAGES

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic and acoustic design requirements

Acoustic Performance: Superior NRC capabilities up-to 0.70

Easy to Install: Scores and snaps easily. Similar installation to conventional plasterboard

COMPLIANCE

Skyrock Ecoblock Acoustical Gypsum board Square Perforation Q10,21.4%

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread

SQUARE PERFORATION Q12,16%





FEATURES & BENEFITS

Great Aesthetics, Excellent Noise Absorption

- Tested to achieve 0.70 NRC (Noise Reduction Coefficient) as per ASTM C423.
- Recessed edges allow for finishing to a flat and seamless ceiling or wall.
- Complies with E84 for classification for fire propagation and surface flame spread

Skyrock Ecoblock Acoustical Gypsum Board Square Perforation Q12,16% is manufactured from a specially formulated core encased in recycled face and back liner papers. The panels have long tapered long edges for easy finishing when used with USG Middle East Sheetrock® All Purpose Joint Compound.

The acoustic plasterboards are punched to specification with engineering precision before being laminated with a non-woven acoustic mat on the back.

These Acoustical Gypsum Board are ideal for various sound absorption applications with enhances and aesthetics look.

INTENDED FOR

- Commercial, office and residential applications
- Retail complexes
- Large scale cinema spaces
- Public venues such as concert halls, auditoriums and sporting venues, schools, universities and lecture halls
- Libraries and hospitals

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- Intended for interior applications only and must be kept dry during handling and storage.
- 3. Exercise care and caution when lifting the panels.
- 4. Consult USG Middle East technical team for the framing spacing.
- 5. Ensure use of 25mm(min.) screws to framing, position screw centrally between holes. Recessed butt and perimeter relief to have screw spacing of 150mm.
- 6. 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.
- 7. Back-blocking is recommended for areas with critical light exposure.
- 8. Must be stored off the ground and under cover.

FINISHING AND DECORATING

It is essential that the level of finish is determined at the design stage since each level has specific requirements for substrate tolerances and gypsum board installation, jointing and finishing. The desired level of finish may not be achieved unless all of these requirements are met through various stages of construction.

USG recommends the use of Sheetrock® All Purpose Joint Compound and the 3 coats jointing system using paper tape to achieve the best jointing strength.

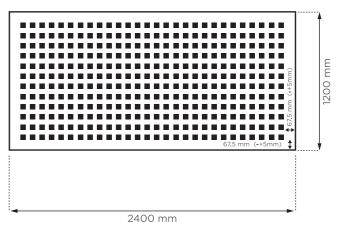
For Priming and decorating with paint, USG recommends using roller applications. Roller application ensures a uniform texture over the entire surface and protects the non-woven acoustic mat on the back face.

Avoid spray painting as it may block holes and thus affect acoustic performance.

PRODUCT DATA

Property	Q12,16%
Weight (kg/m²)	9
Thickness (mm)	12.5
Length (mm)	2400
Width (mm)	1200
Hole Type	Square
Hole Diameter (mm)	12
Pitch (center to center spacing between holes){mm}	30
Border (mm)	67.5
Layout Drawing	As per the below drawing
Perforation Rate (%)	16% with black acoustic tissue at the back
Noise Reduction Coefficient (NRC*)	0.70
Mounting	E-400

^{*}Insulation (Optional) 14kg/m³ glass wool



ADVANTAGES Perfor

Performance: Manufactured in a range of configuration to satisfy a multitude of aesthetic and acoustic design requirements

Acoustic Performance: Superior NRC capabilities up-to 0.70

Easy to Install: Scores and snaps easily. Similar installation to conventional plasterboard

COMPLIANCE

Skyrock Ecoblock Acoustical Gypsum Board Square Perforation Q12,16%

- ASTM C423 for Noise Reduction Coefficient
- E84 for classification for fire propagation and surface flame spread



SKYROCK GYPSUM BOARD REGULAR



FEATURES & BENEFITS

- Ideal for standards interior wall and ceiling panels
- Economical grade gypsum board
- Quick installation and decoration

USG Middle East Gypsum Board Standard Core is asbestos free products. Produced in standard dimension 1200mm x 2400mm composed of a noncombustible gypsum core and encased in a heavy natural-finish paper on the face side and a strong liner paper on the back side. The face paper is folded around the long edges to reinforced and protect the core. Board ends are square cut and finished smooth. Long edges of panels are recessed (tapered) allowing joints to be reinforced and concealed with a joint treatment.

INTENDED FOR

- Commercial or residential applications where regular panels are desired
- New or repair and remodel construction
- Non-fire-rated steel-framed wall and ceiling applications

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- Avoid exposure to excessive, repetitive or continuous moisture before during and after installation. Eliminate sources of moisture immediately.
- 3. Consult USG Middle East technical team for the framing spacing.
- 4. Non-load-bearing.
- 5. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07). Sufficient risers must be used to support the entire length of the gypsum board to prevent sagging.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Location	Application Method	Maximum Frame Spacing OC
Single-layer	Ceilings	Perpendicular	600 mm
		Parallel	600 mm
	Sidewalls	Perpendicular or parallel	600 mm
		Parallel	600 mm
Double-layer	Ceilings	Perpendicular	600 mm
	Sidewalls	Perpendicular or parallel	600 mm

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	Skyrock Gypsum Board Regular		
Thickness	9.5 mm	12.5 mm	15 mm
Weight ¹ , nominal	7.8 kg/m²	9 kg/m²	10.6 kg/m²
Lengths ²	2400 mm	2400 mm	2400 mm
Width	1200 mm	1200 mm	1200 mm
Edges	Tapered	Tapered	Tapered
Packaging	Two panels per bundle	Two panels per bundle	Two panels per bundle
Surface-burning characteristics per ASTM E84	Smoke development: 0 Classification: Class A	Flame spread: 15 Smoke development: 0 Classification: Class A	Flame spread: 15 Smoke development: 0 Classification: Class A

Notes:

- l. Represents approximate weight for design and shipping purposes.
- Other sizes available by special order

COMPLIANCE

Skyrock Gypsum Board Regular comply with:

• ASTM C1396, DIN EN 520 for Dimensions and Flexural Strength

SKYROCK GYPSUM BOARD MOISTURE RESISTANT WETSTOP



FEATURES & BENEFITS

- Quality interior wall and ceiling panels for wet areas
- Score and snap easily
- Quick installation and decoration
- The backer for shower and bath areas

Skyrock Gypsum Board Moisture Resistant WETSTOP is a factory produced, asbestos free, 1200x2400mm standard panel size composed of a noncombustible gypsum core is encased in a heavy natural-finish paper on the face side and a strong liner paper on the back side. The moisture resistance of the gypsum core is increased by adjunction of specific additives that ensures a higher resistance to water penetration.

The face paper is folded around the long edges to reinforce and protect the core, the ends are square cut and finished smooth. Long edges of panels are recessed (tapered) allowing joints to be reinforced and concealed with a joint treatment.

INTENDED FOR

- Commercial or residential applications where Moisture Resistant WETSTOP panels are desired
- New or repair and remodel construction
- · Non-fire-rated steel-framed wall and ceiling
- · New or repair and remodel construction
- High moisture areas

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- Avoid exposure to excessive, repetitive or continuous moisture before during and after installation. Eliminate sources of moisture immediately.
- 3. Non-load-bearing.
- 4. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07). Sufficient risers must be used to support the entire length of the gypsum board to prevent sagging.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Location	Application Method	Maximum Frame Spacing OC ¹
Single-layer	Ceilings	Perpendicular	600 mm
		Parallel	600 mm
	Sidewalls	Perpendicular or parallel	600 mm
		Parallel	600 mm
Double-layer	Ceilings	Perpendicular	600 mm
	Sidewalls	Perpendicular or parallel	600 mm

Notes:

 Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based texturing material is to be applied.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

Skyrock Gypsum Board Moistu	rock Gypsum Board Moisture Resistant WETSTOP		
9.5 mm	12.5 mm	15 mm	
7.1 kg/m²	9.9 kg/m²	11.7 kg/m²	
2400 mm	2400 mm	2400 mm	
1200 mm	1200 mm	1200 mm	
Tapered	Tapered	Tapered	
Two panels per bundle	Two panels per bundle	Two panels per bundle	
Flame spread: 15 Smoke development: 0 Classification: Class A	Flame spread: 15 Smoke development: 0 Classification: Class A	Flame spread: 15 Smoke development: 0 Classification: Class A	
	9.5 mm 7.1 kg/m² 2400 mm 1200 mm Tapered Two panels per bundle Flame spread: 15 Smoke development: 0 Classification: Class A	7.1 kg/m² 9.9 kg/m² 2400 mm 2400 mm 1200 mm 1200 mm Tapered Tapered Two panels per bundle Flame spread: 15 Smoke development: 0 Flame spread: 15 Smoke development: 0	

Notes:

- Represents approximate weight for design and shipping purposes.
- Other sizes available by special order

COMPLIANCE

Skyrock Gypsum Board Moisture Resistant WETSTOP comply with:

• ASTM C1396, DIN EN 520 for Dimensions and Flexural Strength

SKYROCK GYPSUM BOARD FIRESTOP®



FEATURES & BENEFITS

- Skyrock Gypsum Board Firestop® is a specifically formulated fire-resistant core gypsum board providing an ideal solution for projects where specific fire- resistance ratings are required in partition wall and ceiling systems.
- USG Firestop® recommended to be installed with USG ME metal framing systems to provide the lightweight structure, fire and acoustic performances.
- These panels feature a noncombustible gypsum core encased in 100% recycled face and back papers that form a high strength composite design.
- The natural finish face paper is folded around the long edges to reinforce and protect the core, and the ends are cut square and even.
- The panels are classified for fire resistance as per ASTM C1396/C1396 M Type X and EN 520 Type I, F (DIN 18180/BS 1230 Part 1, Type 5)
- Skyrock Gypsum Board Firestop® when used in an acoustic system can provide required levels of sound insulation to achieve specified acoustic ratings.

DESCRIPTION

Skyrock Gypsum Board Firestop® is a factory produced in a standard wide 1200mm special panel for fire resistance applications. The boards are composed of a noncombustible glass-fiber reinforced gypsum core mixed with special additives, encased in a heavy natural-finish paper on the face side and a strong liner paper on the back side. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square cut and finished smooth. Long edges of panels are recessed (tapered) allowing joints to be reinforced and concealed with USG Middle East sheetrock® brand Jointing Compounds.

INTENDED FOR

- Commercial or residential applications where Firestop[™] panels are required
- Fire-rated wall and ceiling assemblies
- Protection of load-bearing and non-load-bearing steel-framed fire-rated walls

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50°C.
- 2. Intended for interior applications only and must be kept dry during handling and
- 3. Exercise care and caution when lifting the panels.
- 4. Consult USG Middle East technical team for the framing spacing.
- 5. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07)
- 6. Not for load-bearing design and not a structural panel.
- 7. Must be stored off the ground and under cover.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Location	Application Method	Maximum Frame Spacing OC ¹
Single-layer	Ceilings	Perpendicular	600 mm
		Parallel	600 mm
	Sidewalls	Perpendicular or parallel	600 mm
		Parallel	600 mm
Double-layer	Ceilings	Perpendicular	600 mm
	Sidewalls	Perpendicular or parallel	600 mm

Notes:1. Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based texturing material is to be applied.

FINISHING AND **DECORATING**

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	Skyrock Gypsum Board Firestop®		
Thickness	12.5 mm	15 mm	16 mm
Weight¹, nominal	8.9 kg/m²	10.7 kg/m ²	11.4 kg/m²
Lengths ²	2400 mm	2400 mm	2400 mm
Width	1200 mm	1200 mm	1200 mm
Edges	Tapered	Tapered	Tapered
Packaging	Two panels per bundle		Two panels per bundle
Surface-burning characteristics per ASTM E84	Flame spread: < 25 Smoke development: 0 Classification: Class A	Flame spread: < 25 Smoke development: 0 Classification: Class A	Flame spread: < 25 Smoke development: 0 Classification: Class A

- Represents approximate weight for design and shipping purposes.
 Other sizes available by special order.

COMPLIANCE

Skyrock Gypsum Board Firestop® comply with:

- ASTM C1396/C1396 M Type X
- EN 520 Type I, F (DIN 18180/BS 1230 Part 1, Type 5)
- Surface burning in accordance with ASTM E84 gives flame spread < 25

SUSTAINABILITY

- Skyrock Gypsum Board Firestop® is manufactured using 100% recycled liner paper.
- Skyrock Gypsum Board Firestop® has been independently certified by Good Environmental Choice Australia (GECA) and complies with requirements of GECA 04-2011 v2 - Panel Boards Standard.
- Independently tested for VOC and formaldehyde.
- The use of Skyrock Gypsum Board Firestop® may contribute credit points when assessed under various Green Star Rating Tools
- Skyrock Gypsum Board Firestop® when used in an acoustic system can provide required levels of sound insulation to achieve specified acoustic ratings

SKYROCK GYPSUM BOARD WETSTOP FIRESTOP®



FEATURES & BENEFITS

- Quality interior wall and ceiling panels where fire resistance is required in wet areas
- Score and snap easily
- Quick installation and decoration

Skyrock Gypsum Board WetStop Firestop® is a factory produced in a standard wide 1200mm special panel combining the water-resistance and fire resistance of wet area and firestop boards. The boards are composed of a noncombustible glass-fiber reinforced gypsum core mixed with special additives, encased in a heavy naturalfinish paper on the face side and a strong liner paper on the back side. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square cut and finished smooth. Long edges of panels are recessed (tapered) allowing joints to be reinforced and concealed with USG Middle East sheetrock® brand Jointing Compounds.

INTENDED FOR

- Commercial or residential applications where WetStop Firestop® panels are required
- New or repair and remodel construction
- Fire-rated walls and ceilings assemblies
- Protection of load-bearing and non-load-bearing steel frame fire-rated walls
- New or repair and remodel construction
- High moisture areas

- 1. Avoid exposure to sustained temperatures exceeding 50°C.
 - 2. Intended for interior applications only and must be kept dry during handling and
 - 3. Exercise care and caution when lifting the panels.
 - 4. Consult USG Middle East technical team for the framing spacing.
 - 5. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07)
 - 6. Not for load-bearing design and not a structural panel.
 - 7. Must be stored off the ground and under cover.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Location	Application Method	Maximum Frame Spacing OC ¹
Single-layer	Ceilings	Perpendicular	600 mm
		Parallel	600 mm
	Sidewalls	Perpendicular or parallel	600 mm
		Parallel	600 mm
Double-layer	Ceilings	Perpendicular	600 mm
	Sidewalls	Perpendicular or parallel	600 mm

. Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	Skyrock Gypsum Board Wetsto	op Firestop*		
Thickness	12.5 mm	15 mm	16 mm	
Weight¹, nominal	8.8 kg/m ²	10.5 kg/m²	11.3 kg/m²	
Lengths ²	2400 mm	2400 mm	2400 mm	
Width	1200 mm	1200 mm	1200 mm	
Edges	Tapered	Tapered	Tapered	
Packaging	Two panels per bundle	Two panels per bundle		
Surface-burning characteristics per ASTM E84	Flame spread: < 25 Smoke development: 0 Classification: Class A	Flame spread: < 25 Smoke development: 0 Classification: Class A	Flame spread: < 25 Smoke development: 0 Classification: Class A	

- Represents approximate weight for design and shipping purposes.
- Other sizes available by special order

COMPLIANCE

Skyrock Gypsum Board Wetstop Firestop® comply with:

- ASTM C1396/C1396 M Type X
- EN 520 Type I, F (DIN 18180/BS 1230 Part 1, Type 5)
- Surface burning in accordance with ASTM E84 gives flame spread < 25



SHEETROCK® BRAND REGULAR **GYPSUM BOARD**



FEATURES & BENEFITS

Quality 12.7 mm wall and ceiling panels for interior applications

- · Quick installation and decoration
- · Resistant to cracking and warping
- Dry construction
- Sore and snap easily
- Meet or exceed ASTM C1396, Standard Specification for Gypsum Board
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC
- emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand Gypsum Panels are manufactured with a core comprised of fire resistant gypsum encased in 100% recycled face and back papers. The natural finish face paper is folded around the long edges to protect the core and the ends are cut square and even. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems.

INTENDED FOR

- Non fire rated single-layer wall and ceiling applications
- New residential, commercial, or repair and remodel construction
- Wood or steel framing
- 12.7 mm panels are recommended for single-layer applications in new residential construction

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before during and after installation. Eliminate sources of moisture immediately.
- 3. Non-load-bearing.
- 4. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07). Sufficient risers must be used to support the entire length of the gypsum board to prevent sagging.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Location	Application Method	Maximum Frame Spacing OC1
Single-layer	Ceilings	Perpendicular	600 mm
		Parallel	600 mm
	Sidewalls	Perpendicular or parallel	600 mm
		Parallel	600 mm
Double-layer	Ceilings	Perpendicular	600 mm
	Sidewalls	Perpendicular or parallel	600 mm

Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based texturing material is to be applied.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment. where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG Middle East All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	Sheetrock* Brand Regular Gypsum Boards
Thickness	12.7 mm
Lengths	2440 - 4880 mm
Width ¹	1220 mm
Weight ² , nominal	7.7 kg/m²
Edges	Tapered
Packaging	Two panels per bundle
Surface-burning characteristics per ASTM E84	Flame spread: 15 Smoke development: 0 Classification: Class A

- Notes:
 1. Other sizes available by special order.
 2. Represents approximate weight for design and shipping purposes.

COMPLIANCE

- Meet or exceed ASTM C1396 specifications
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND FIRECODE® **TYPE C PANELS**



FEATURES & BENEFITS

Specially formulated mineral core provides superior fire resistance for ceiling applications

- 12.7 mm and 15.9 mm Type C panels for use on walls and ceilings
- Feature a noncombustible gypsum core encased in 100% recycled face and back papers
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 12.7 mm and 15.9 mm Type X
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

Available in 12.7 mm and 15.9 mm thicknesses, USG Sheetrock® Brand Firecode® Type C Panels feature a specially formulated mineral core that provides superior fire resistance for ceiling applications. These panels feature a noncombustible gypsum core encased in 100% recycled face and back papers that form a high strength composite design. The natural finish face paper is folded around the long edges to reinforce and protect the core, and the ends are cut square and even. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type C panels are listed. On the face along the long edge of each panel, the UL Type Designation is printed for easy identification after installation by building inspectors.

INTENDED FOR

- Commercial or residential applications where Type C panels are required
- New or repair and remodel construction
- Fire-rated wall and ceiling assemblies
- Single-layer, fire-rated ceiling assemblies with insulation in the plenum
- Protection of load-bearing and non-load-bearing wood- or steel-framed fire-rated walls

LIMITATIONS

1. Avoid exposure to sustained temperatures exceeding 50 °C.

- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801).

INTERIOR INSTALLATION

USG Sheetrock® Brand Firecode® C Panels install and finish just like standard 12.7 mm and 15.9 mm USG Sheetrock® Brand gypsum panels.

Maximum Frame Spacing Drywall Construction

Direct Application	Panel Thickness	Location	Application Method ¹	Maximum Frame Spacing OC ³
Single-layer	Single-layer 12.7 mm	Ceilings	Perpendicular	600 mm
			Parallel ²	400 mm
		Sidewalls	Parallel or perpendicular	600 mm
			Parallel ²	400 mm
		Ceilings	Perpendicular	600 mm
	15.9 mm	Ceilings	Parallel or perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm
Double-layer	12.7 mm	Ceilings	Perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm
	15.9 mm	Ceilings	Parallel or perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm

- l. Long edge position relative to framing.
- 2. Not recommended if water-based texturing material is to be applied.

 3. Consult USG Middle East technical team for the framing spacing if fire rating required.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	UL Type C	
	Sheetrock* Brand Firecode* Type C P	Panels
Thickness	12.7 mm	15.9 mm
Lengths	2440 mm - 4270 mm	2440 mm - 4270 mm
Width ¹	1220 mm, 1370 mm	1220 mm, 1370 mm
Weight², nominal	11.4 kg/m ²	12.3 kg/m ²
Edges	Tapered	Tapered
Packaging	Two panels per bundle	Two panels per bundle

- 1. Other sizes available by special order.
 2. Represents approximate weight for design and shipping purposes.

COMPLIANCE

- Comply with ASTM C1396 for 12.7 mm and 15.9 mm Type C
- · Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and core
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND FIRECODE® TYPE X PANELS



DESCRIPTION

FEATURES & BENEFITS

The original 15.9 mm Type X wallboards for interior walls and ceilings

- Provide additional fire resistance over regular panels
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Comply with ASTM C1396 physical properties for 15.9 mm Type X gypsum wallboard
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

USG Sheetrock® Brand Firecode® Type X Panels (UL Type SCX) are 15.9 mm. Type X panels that feature a fire-resistant gypsum core encased in 100% recycled face and back papers that form a high strength composite design.

The natural finish face paper is folded around the long edges to reinforce and protect the core, and the ends are cut square and even. The long edges of panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems, USG Sheetrock® Brand Firecode® X Panels are UL Classified for fire resistance and can be used in any UL Design where Type SCX panels are listed. The UL Type Designation is printed with nonbleeding ink on the face along the long edge of each panel for easy identification by building inspectors.

INTENDED FOR

- Commercial or residential applications where 15.9 mm Type X panels are required
- New or repair and remodel construction
- Protection of load-bearing and non-load-bearing wood-or steel-framed fire-rated walls

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Consult USG Middle East technical team for the framing spacing.
- 4. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07).
- 5. Not for load-bearing design and not a structural panel.

INTERIOR INSTALLATION

Maximum Frame Spacing Drywall Construction

Direct Application	Panel Thickness	Location	Application Method ¹	Maximum Frame Spacing OC ²
Single-layer	15.9 mm	Ceilings	Perpendicular	600 mm
		Sidewalls	Parallel or perpendicular	600 mm
Double-layer	15.9 mm	Ceilings	Parallel or perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm

2. Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting. For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

TEST DATA

Property		ASTM Test Method	ASTM C1396 Specification 15.9 mm Wallboard	UL Type SCX
Noncombustibility	Flame Spread	E136	Pass	Pass
Surface-burning characteristics		E84	Flame Spread Index, not greater than 25	15
	Smoke Developed	E84	Smoke Developed Index, not greater than 450	0
	Classification	E84	-	Class A
Core hardness (lbf)	Field	C473 (B)	Not less than 11	Meets or exceeds
	End	C473 (B)	Not less than 11	Meets or exceeds
	Edge	C473 (B)	Not less than 11	Meets or exceeds
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 46	Meets or exceeds
	Perpendicular	C473 (B)	Not less than 147	Meets or exceeds
Humidified deflection		C473	Not greater than 15.9 mm	Less than
Nail pull resistance (lbf)		C473 (B)	Not less than 87	Meets or exceeds

PRODUCT DATA

	Sheetrock* Brand Firecode* Type X Panels
Thickness	15.9 mm
Lengths	2440 mm
Width ¹	1220 mm
Weight², nominal	11.2 kg/m ²
Edges	Tapered
Packaging	Two panels per bundle

Notes..

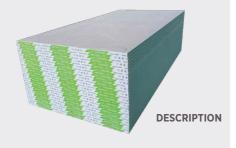
1. Other sizes available by special order.

2. Represents approximate weight for design and shipping purposes.

COMPLIANCE

- Meet or exceed ASTM C1396 Section 5 for 15.9 mm gypsum wallboard, Type X
- · Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and core
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND GYPSUM **BOARD 12.7MM WET STOP MOISTURE RESISTANT**



FEATURES & BENEFITS

- Quality interior wall and ceiling panels where moisture resistance is required
- Score and snap easily
- Quick installation and decoration
- The backer for shower and bath areas

Sheetrock® Brand Gypsum Board 12.7mm Wet Stop Moisture Resistant are factoryfabricated, Asbestos free, composed of a noncombustible Gypsum core encased in heavy natural-finish face paper and strong liner paper on the back side.

The moisture resistance of the Gypsum core is increased by adding a specific additives that insures a higher resistance to water penetration. The face paper is folded around the long edges to reinforce and protect the core, and the ends are square-cut and finished smooth. Long edges of panels are tapered, allowing joints to be reinforced and concealed with a Sheetrock Joint treatment system.

INTENDED FOR

- 12.7mm Gypsum Panel recommended for single-layer application in residential
- Commercial or residential applications where 12.7 mm panels are desired
- New or repair and remodel construction
- Non-fire-rated steel-framed wall and ceiling
- High moisture areas

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 52 °C.
 - 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
 - 3. Non-load bearing.
 - 4. Consult USG Middle East technical team for the framing spacing.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wall covering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

Size: 12.7mm

Board Dimension: 1200mm x 2400mm, lengths up-to 3660 mm are available upon

Weight: 8.5 kg/m² -/+ 5%.

Thermal Resistance "R": 0.079m² K/W.

Density: 725 kg/m³.

Water resistance/water absorption: Not more than 5% weight after 2 hours immersion. Thermal Coefficient of Expansion: Unrestrained: 4 - 38 °C: 9.0 x 10⁻⁶ in./ in./ °F (16.2 x 10⁻⁶ mm/mm/°C)(16.2 _m/m/°C).

Hygrometric Coefficient of Expansion: Unrestrained: 5-90% r.h. 7.2 x 10-6 in./in./% r.h. (7.2 $\times 10^{-6} \text{ mm/mm/}\% \text{ r.h.}) (7.2 \,\mu\text{m/m/}\% \text{ r.h.}).$

Packaging: 74 board per pallet.

MAXIMUM FRAME SPACING DRYWALL CONSTRUCTION

DIRECT APPLICATION	PANEL THICKNESS	LOCATION	APPLICATION METHOD	MAX. FRAME SPACING OC1
Single-Layer	12.7 mm	ceilings	perpendicular	600 mm
			parallel	400 mm
	sidewalls	parallel or perpendicular	600 mm	
			parallel	400 mm
Double-Layer	12.7 mm	ceilings	parallel or perpendicular	600 mm
		sidewalls	perpendicular	600 mm

. Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based texturing material is to be applied.

COMPLIANCE

Sheetrock® Brand Gypsum Board 12.7mm Wet Stop Moisture Resistant Comply with:

ASTM C1396/C - 1396m - 04, C630

SHEETROCK® BRAND FLEXIBLE GYPSUM BOARD 6.4MM FIRECODE™



FEATURES & BENEFITS

- More flexible than standard 6.4mm Sheetrock® Panels
- Designed to construct curved surfaces easily
- · Quick installation and decoration
- Lightweight, fire-resistant dry construction

Sheetrock® Brand Flexible Gypsum Board 6.4mm Firecode® have a noncombustible gypsum core that is encased in a 100 percent recycled face and back paper. The panels are UL classified for fire resistance (type R) and feature tapered edges for easy installation.

INTENDED FOR

- Curved Walls and surfaces
- Interior Decoration for iconic projects

LIMITATIONS

- 1. Avoid exposure to temperatures exceeding 52 °C.
- 2. Avoid exposure to excessive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Non-load bearing
- 4. Application of gypsum panels over an insulating blanket, installed continuously across the face of the framing members, is not recommended. Blankets should be recessed and blanket flanges attached to sides of studs or joists.
- 5. Painting Systems—for satisfactory results, painting products and systems should be used which comply with recommendations and requirements in Appendices of ASTM

FINISHING AND

For priming and decorating with paint, texture, or wall covering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

ADVANTAGES

Dry construction: Factory-fabricated gypsum panels eliminate excessive moisture in

Low in-place cost: The easily cut gypsum panels apply quickly, permit painting or other decoration, and allow installation of metal or wood trim almost immediately.

Fire protection: The gypsum core will not support combustion or transmit temperatures greatly in excess of 100 °C until completely calcined—a slow process.

Crack resistance: With joints reinforced by one of USG ME joint systems, SHEETROCK® Brand Flexible Gypsum Board 6.4mm Firecode® form walls and ceilings that are exceptionally resistant to cracks caused by structural, thermal, and hygrometric changes. Nonwarping: Expansion or contraction under normal atmospheric changes is negligiblewon't cause harmful warping or buckling.

INTERIOR INSTALLATION

Sheetrock® Brand Flexible Gypsum Board 6.4mm Firecode™ installed in maximum Frame Spacing Drywall Construction as the below table

				Minimum Bending Radii ²	
Application	Condition	Framing Spacing OC ¹	Fastener Spacing ¹	Gypsum Panel Perpendicular to Framing	Gypsum Panel Parallel to Framing
Inside (concave)	Dry	150mm	Edge: 150mm OC	760mm	510mm
			Field: 200mm OC		
Outside (convex)	Dry	150mm	Edge: 150mm OC	760mm	300mm
			Field: 200mm OC		

- . Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based
- texturing material is to be applied.

 2. Bending radii for gypsum panels were evaluated at 21 °C and 50% relative humidity. Since ambient conditions can influence field results, a mock-up should be constructed with adjustments as needed

PRODUCT DATA

Sheetrock® Brand Flexible Gypsum Board 6.4mm Firecode™
6.4mm
2440mm - 3660mm
1220mm
5.9 kg/m²
0.04 x m²/W
Tapered
Two panels per bundle

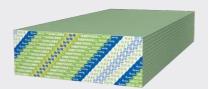
- Other sizes available by special order.
 Represents approximate weight for design and shipping purposes.

COMPLIANCE

Compliance with Standards

- Comply with ASTM C1396 for 6.4mm gypsum wallboard
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to surface-burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND MOLD TOUGH® PANELS FIRECODE® TYPE C



FEATURES & BENEFITS

12.7 mm and 15.9 mm Type C wallboard with moisture and mold resistance

- 12.7 mm and 15.9 mm Type C moisture and mold-resistant panels for use on walls and
- Specially formulated mineral core that provides superior fire resistance for ceiling applications
- Feature a noncombustible, moisture- and mold-resistant gypsum core encased in moisture- and mold-resistant, 100% recycled green face and brown back papers.
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 12.7 mm and 15.9 mm Type X, water-resistant gypsum wallboard and exterior gypsum soffit board
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand Mold Tough® Panels Firecode® Type C are available in 12.7 mm and 15.9 mm thicknesses. These panels feature a noncombustible, moisture and moldresistant gypsum core that is encased in moisture- and mold-resistant, 100% recycled green face and brown back papers. When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels meet or exceed ASTM C1396 specifications. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type C panels are listed. On the face along the long edge of each panel, the UL Type Designation is printed for easy identification by building inspector

INTENDED FOR

- Commercial or residential applications where Type C panels are required
- New or repair and remodel construction
- Fire-rated wall and ceiling assemblies
- Single-layer, fire-rated ceiling assemblies with insulation in the plenum
- Protected exterior soffit and ceiling applications
- Protection of load-bearing and non-load-bearing wood- or steel-framed fire-rated walls

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50°C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801).
- 4. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers and other areas subject to direct water exposure.
- 5. Use as a tile substrate is limited to tile installed according to the most current TCNA and ANSI specifications. Please consult with the adhesive and tile manufacturers for their recommendations for maximum size and weight parameters for use with gypsum
- 6. Not recommended for exterior soffits and ceilings which project upwards and away from the building proper.

INTERIOR INSTALLATION

Sheetrock® Brand Mold Tough® Panels Firecode® Type C install and finish just like standard 12.7 mm and 15.9 mm USG Sheetrock® Brand gypsum panels.

Maximum Frame Spacing Drywall Construction

Direct Application	Panel Thickness	Location	Application Method ¹	Maximum Frame Spacing OC ²
Single-layer	12.7 mm	Ceilings	Perpendicular	600 mm
			Parallel ³	400 mm
		Sidewalls	Parallel or perpendicular	600 mm
			Parallel ³	400 mm
	15.9 mm	Ceilings	Perpendicular	600 mm
		Sidewalls	Parallel or perpendicular	600 mm
	12.7 mm	Ceilings	Parallel or perpendicular	600 mm
Double-layer		Sidewalls	Perpendicular	600 mm
	15.9 mm	Ceilings	Parallel or perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm

- Long edge position relative to framing.
 Consult USG Middle East technical team for the framing spacing if fire rating required.
 Not recommended if water-based texturing material is to be applied.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

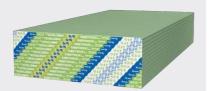
	UL Type C			
	Sheetrock* Brand Mold Tough* Pan	Sheetrock* Brand Mold Tough* Panels Firecode* Type C		
Thickness	12.7 mm	15.9 mm		
Lengths	2440 mm - 3660 mm	2440 mm - 3660 mm		
Width ¹	1220 mm	1220 mm		
Weight², nominal	11.2 kg/m ²	12.3 kg/m ²		
Edges	Tapered	Tapered		
Packaging	Two panels per bundle	Two panels per bundle		

- Other sizes available by special order.
- Represents approximate weight for design and shipping purposes.

COMPLIANCE

- Comply with ASTM C1396 for 12.7 mm and 15.9 mm Type X, water resistant gypsum wallboard and exterior gypsum soffit board
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and core
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND GYPSUM **BOARD MOLD TOUGH™ FIRECODE X**



FEATURES & BENEFITS

15.9 mm Type X wallboard with moisture and mold resistance

- 15.9 mm Type X moisture- and mold-resistant panels for use on walls and ceilings
- Feature a noncombustible, moisture- and mold-resistant gypsum core encased in moisture- and mold-resistant, 100% recycled green face and brown back papers
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 15.9 mm Type X, water resistant gypsum wallboard and exterior gypsum soffit board
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface burning characteristics and noncombustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

Sheetrock® Brand Gypsum Board Mold Tough™ Firecode X feature a noncombustible, moisture- and mold-resistant gypsum core that is encased in moisture- and moldresistant, 100% recycled green face and brown back papers. When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels meet or exceed ASTM C1396 specifications. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Middle East Sheetrock® Brand All Purpose Joint Compound. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type SCX panels are listed. On the face along the long edge of each panel, the UL Type Designation is printed for easy identification by building inspectors.

INTENDED FOR

- Commercial or residential applications where moisture and mold resistance Gypsum board are required
- Interior tile substrate in dry locations or areas with limited water exposure
- Protected exterior soffit and ceiling applications

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801).
- 4. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers and other areas subject to direct water exposure. USG ME recommends Securock[™] Brand Glass Mat Sheathing for such applications.
- 5. Use as a tile substrate is limited to tile installed according to the most current TCNA and ANSI specifications. Please consult with the adhesive and tile manufacturers for their recommendations for maximum size and weight parameters for use with gypsum
- 6. Not recommended for exterior soffits and ceilings which project upwards and away from the building proper.
- 7. For protected exterior ceiling and soffit applications, the panels must be protected from direct exposure to weather.

INTERIOR INSTALLATION

Sheetrock® Brand Gypsum Board Mold Tough™ Firecode X install and finish just like standard 15.9 mm

Maximum Frame Spacing Drywall Construction

Direct Application	Panel Thickness	Location	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC ¹
Single-layer	15.9 mm	Ceilings	Perpendicular	600 mm
		Sidewalls	Parallel or perpendicular	600 mm
Double-layer	15.9 mm	Ceilings	perpendicular	600 mm
		Sidewalls	Perpendicular	600 mm

Notes:1. Consult USG Middle East technical team for the framing spacing if fire rating required and if water-based texturing material is to be applied.

FINISHING AND **DECORATING**

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840.

For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. Gypsum Association's Recommended Specification for Levels of Gypsum Board Finish (GA-214) should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with Sheetrock® Tuff-Hide™ primer-Surfacer or with an undiluted, interior latex flat paint with high-solids content. Allow to dry before decorating. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural side lighting, or will be decorated with a gloss paint (eggshell, semi gloss or gloss), the gypsum panel should be skim coated with USG ME Sheetrock® Brand All Purpose Joint Compound. This equalizes suction and texture differences between the drywall face paper and the finished joint compound before painting. When a Level 5 finish is required, use USG Middle East Sheetrock® Brand Sheetrock® Brand Tuff-Hide™ Primer-Surfacer.

PRODUCT DATA

	Sheetrock® Brand Gypsum Board Mold Tough™ Firecode X	
Thickness	15.9 mm	
Lengths ¹	2440 mm	
Width	1220 mm	
Weight², nominal	11.6 kg/m²	
Edges	Tapered	
Packaging	Two panels per bundle	

1. Other sizes available by special order. 2. -/+ 5%

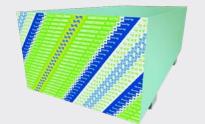
Moisture And Mold Resistance

Per ASTM C473, the average water absorption for Sheetrock® Brand Gypsum Board Mold Tough™ Firecode™ is not greater than 5% by weight after two-hour immersion. In independent lab tests conducted on USG Sheetrock® Brand EcoSmart Panels Mold Tough® Firecode® X at the time of manufacture per ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels meet or exceed ASTM C1396 specifications.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

- Comply with ASTM C1396 for 12.7 mm and 15.9 mm Type X, water resistant gypsum wallboard and exterior gypsum soffit board
 - Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
 - UL Classification as to fire resistance, surface-burning characteristics and core combustibility
 - Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)





FEATURES & BENEFITS

Low-cost, abuse-resistant panels with moisture and mold resistance

- Designed and tested to offer greater resistance to surface indentation and impact damage than standard USG Sheetrock® Brand Gypsum Panels
- Meets ASTM C1629 Level 2 for abrasion resistance and soft-body impact, and Level 1 for indentation performance
- Can be used as a tile substrate in any location or area with limited water exposure
- Underwriters Laboratories Inc. (UL) Classification as to fire as to fire resistance, surface burning characteristics and noncombustibility
- USG Sheetrock® Brand Mold Tough® AR Firecode® X Panels have achieved GREENGUARD GOLD Certification

DESCRIPTION

USG Sheetrock® Brand Mold Tough® AR Firecode® Type X Panels are available in UL Type Designation AR, and were designed and tested to offer greater resistance to surface indentation and impact damage than standard USG Sheetrock® Brand Gypsum Panels. These panels are a low-cost alternative to other systems for partitions that require greater impact resistance, are UL Classified as to fi re resistance and meet the requirements for Type X in the model building code.

USG Sheetrock® Brand Mold Tough® AR Firecode® X Panels have a noncombustible, moisture resistant core that is encased in moisture- and mold-resistant, 100 percent recycled green-face and brown-back papers.

The face paper is folded around the long edges to reinforce and protect the core, and the ends are square cut and finished smooth. Long edges of panels are tapered, allowing joints to be reinforced and concealed with a USG joint treatment system.

Notes

- 1. Firecode* X Panels. The panels are UL Classified for fire resistance and can be used in any UL 2. Design where Type X panels are listed. On the face along the long edge of each panel, the UL
- 3. Type Designation is printed for easy identification after installation

INTENDED FOR

- Areas where moisture and mold resistance is desired
- Commercial applications where greater resistance to indentation and impact damage are required
- New or repair and remodel construction
- Fire-rated wall assemblies

LIMITATIONS

- 1. Avoid sustained exposure to temperatures exceeding 50°C.
- 2. Maximum framing spacing for walls is 400 mm o.c.
- 3. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 4. Must be stored off the ground and under cover in accordance with Gypsum Association publication GA-801, Handling and Storage of Gypsum Panel Products.
- 5. For abuse-resistant construction over steel framing, minimum 20-gauge drywall steel studs (0.8 mm design thickness) as defined by the Steel Stud Manufacturers Association (SSMA) are required.
- 6. Application of USG Sheetrock® Brand Mold Tough® AR Firecode® Type X Panels over insulating blanket, installed continuously across the framing members is not recommended. Blankets should be recessed and blanket flanges attached to sides of studs or joists.
- 7. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers and other areas subject to direct water exposure.
- 8. Use as a tile substrate is limited to tile installed according to the most current TCNA and ANSI specifications. Please consult with the adhesive and tile manufacturers for their recommendations for maximum size and weight parameters for use with gypsum board.

INTERIOR INSTALLATION

USG Sheetrock® Brand Mold Tough® AR Firecode® Type X Panels are by design stronger and have greater surface hardness than standard 15.9 mm. Type X panels. Because of this, they are heavier and will be expectedly more difficult to install. Slower installation production rates should be accounted for in job planning.

Installing USG Sheetrock® Brand Mold Tough® AR Firecode® Type X Panels on studs fabricated with steel thinner than true 20-gauge drywall steel studs (0.8 mm design thickness) as defined by the SSMA may result in increased fastener strip-out, improper screw head seating, or other related conditions. The equivalent gauge framing is also more sensitive to screw configuration and thread pitch. Due to the wide variety of "equivalent" or "effective" gauge studs and the variation by manufacturer in actual steel thickness, USG has no specific recommendations for installing USG Sheetrock® Brand Mold Tough® AR Firecode® X Panels on equivalent gauge.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

	Sheetrock* Brand Mold Tough* AR Firecode* Type X Panels
Thickness	15.9 mm
Lengths and Widths ¹	1220 mm x 1220 mm, 1220 mm x 2440 mm
Weight ²	13.67 kg/m2
Edges	Tapered
Packaging	Two panels per bundle

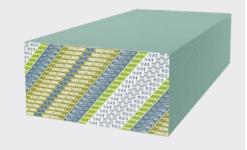
Notes::

- 1. Other lengths available via special order (minimum order quantities may apply).
- 2. Represents approximate weight for design and shipping purposes.

COMPLIANCE

Meets ASTM C1629 Level 2 for abrasion resistance and soft-body impact, and Level 1 for indentation performance.

SHEETROCK® BRAND ULTRALIGHT PANELS MOLD TOUGH®



FEATURES & BENEFITS

Ultralightweight 12.7 mm panels with moisture and mold resistance for wall and ceiling applications

- The industry's first lightweight 12.7 mm panels with moisture and mold resistance
- Feature a non-combustible, moisture-resistant gypsum core encased in moisture- and mold resistant, 100% recycled green face and brown back papers
- Superior score and snap for a cleaner edge and faster installation
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 12.7 mm water resistant gypsum wallboard and 12.7 mm exterior gypsum soffit board
- Underwriters Laboratories Inc. (UL) Classification as to surface-burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand UltraLight Panels Mold Tough® are lightweight 12.7 mm gypsum panels that feature proprietary core and paper technologies, resulting in a high strength-to-weight ratio composite design. The non-combustible, moisture-resistant gypsum core is encased in moisture and mold-resistant, 100% recycled green face and brown back papers, and the face paper is folded around the long edges to reinforce and protect the core. When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels meet or exceed ASTM C1396 specifications. The ends of the panels are cut square and even, while the long edges are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems.

INTENDED FOR

- Commercial or residential applications where 12.7 mm panels with moisture and mold resistance are desired
- New or repair and remodel construction
- Non-fire-rated wood- or steel-framed wall and ceiling applications
- Interior tile substrate in dry locations or areas with limited water exposure
- Protected exterior soffit and ceiling applications

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50°C.
- Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's GA-801, Handling and Storage of Gypsum Panel Products.
- 4. For protected exterior ceiling and soffit applications, the panels must be protected from direct exposure to weather. Refer to the USG Gypsum Construction Handbook for installation recommendations.
- 5. Not recommended for exterior soffits and ceilings which project upwards and away from the building proper.
- 6. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers and other areas subject to direct water exposure.
- 7. Use as a tile substrate is limited to tile installed according to the most current TCNA and ANSI specifications. Consult with adhesive and tile manufacturers for recommendations for maximum size and weight parameters for use with gypsum board.

INTERIOR INSTALLATION

For maximum framing spacing in non-fire-resistance-rated applications of gypsum panel products, refer to Gypsum Association's GA-216, Specifications for the Application and Finishing of Gypsum Panel Products or ASTM C840, Standard Specification for Application and Finishing of Gypsum Board.

Maximum Framing Spacing for Single-Layer Application

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	12.7 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	12.7 mm	Parallel	600 mm
		Perpendicular	600 mm

Maximum Framing Spacing for Multi-Layer Application Without Adhesive Between Layers

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	12.7 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	12.7 mm	Parallel	600 mm
		Perpendicular	600 mm

Notes

1. Consult USG Middle East technical team for the framing spacing if fire rating required.

FINISHING AND DECORATING

Fastener Spacing, Single-Layer Over Metal Framing

Fastener Type	Location	Maximum Spacing
Nails, 32 mm annular ring 5d drywall nail complying with ASTM C514, Standard Specification for Nails for	Ceilings	180 mm
the Application of Gypsum Board	Walls	200 mm
Screws, 32 mm Type W bugle head complying with	Ceilings	300 mm
ASTM C1002, Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs	Walls	400 mm
Screws (same as above)	RC-1, ceilings or walls	300 mm
Adhesive¹ with nails or screws (same as above)	Ceilings, long edges perpendicular to framing members	410 mm at ends, one fastener per framing member at edges, one fastener in center of panel
	Walls, long edges perpendicular to framing members	410 mm at ends, one fastener per framing member at edges, one fastener in center of panel
	Walls, long edges parallel to framing members	410 mm) along edges, one fastener per framing member at ends, one fastener in center of panel

Notes:

In order to minimize or eliminate the occurrence of raised protrusions or screw buttons, USG recommends the installer confirm
that the adhesive has fully cured, has stopped shrinking and has stabilized prior to finishing the panel.

FINISHING AND DECORATING

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing products.

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. Gypsum Association's GA-214, Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration. All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with USG Sheetrock® Brand finishing products or with an undiluted, interior latex flat paint with high-solids content. Allow to dry before decorating.

To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural lighting, or will be decorated with a gloss paint (eggshell, semigloss or gloss), the gypsum panel should be skim coated with joint compound. This equalizes suction and texture differences between the drywall face paper and the finished joint compound before painting. When a Level 5 finish is required, use USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer.

INSTALLATION

Property		ASTM Test Method	Requirement	UL Type ULX
Noncombustibility		E136	Noncombustible	Meets
Surface-burning characteristics	Flame Spread	E84	Flame Spread Index, not greater than 25¹	15
	Smoke Developed	E84	-	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness (lbf)	Field	C473 (B)	Not less than 11 lbf	Meets
	End	C473 (B)	Not less than 11 lbf	Meets
	Edge	C473 (B)	Not less than 11 lbf	Meets
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 36 lbf	Meets
	Perpendicular	C473 (B)	Not less than 107 lbf	Meets
Humidified deflection, gypsum wallboard		C473	Not greater than 32 mm ¹	Meets
Nail pull resistance (lbf)		C473 (B)	Not less than 77 lbf	Meets

 Per ASTM C1396 for 12.7 mm gypsum wallboard and gypsum ceiling board.
 Per ASTM C473, Test Methods for Physical Testing of Gypsum Panel Products, the average water absorption for USG Sheetrock* Brand UltraLight Panels Mold Tough* is not greater than 5% by weight after two-hour immersion. In independent lab tests conducted per ASTM D3273 at the time of manufacture, the panels

neet or exceed ASTM Cl396 specifications. This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

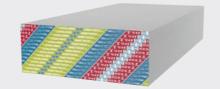
PRODUCT DATA

	Sheetrock* Brand Ultralight Panels Mold Tough*
Thickness	12.7 mm
Lengths ¹	2440
Width	1220 mm
Weight ² , nominal	6.59 kg/m²
Edges	Tapered
Packaging	Two panels per bundle

- Other sizes available by special order.
 Represents approximate weight for design and shipping purposes.

- Comply with ASTM C1396 for 12.7 mm water-resistant gypsum wallboard and 12.7 mm exterior gypsum soffit board
 - Classified as a Class A Interior Finish Material per Section 803.1 of the International
 - UL Classification as to surface-burning characteristics and non-combustibility
 - Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND ULTRALIGHT PANELS FIRECODE® X



FEATURES & BENEFITS

Ultralightweight 15.9 mm Type X panels for interior wall and ceiling applications

- Offer comparable sound, strength and sag resistance to standard 15.9 mm Type X
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 15.9 mm and Type X gypsum wallboard
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface-burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand UltraLight Panels Firecode® X (UL Type ULX) are 15.9 mm Type X gypsum panels formulated to achieve all of the same strength and performance characteristics as standard 15.9 mm USG Sheetrock® Brand Firecode® X Panels at a reduced weight. These lightweight panels feature a noncombustible gypsum core that is encased in 100% recycled face and back papers. The face paper is folded around the long edges to reinforce and protect the core, and the ends are cut square and even. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type ULX panels are listed. On the face along the long edge of each panel, the UL Type Designation is printed for easy identification by building inspectors.

INTENDED FOR

- Commercial or residential applications where 15.9 mm Type X panels are required
- New or repair and remodel construction
- · Load-bearing and non-load-bearing wood- or steel-framed fire-rated walls and ceilings

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 52°C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's GA-801, Handling and Storage of Gypsum Panel Products.

INTERIOR INSTALLATION

For maximum framing spacing in non-fire-resistance-rated applications of gypsum panel products, refer to Gypsum Association's GA-216, Specifications for the Application and Finishing of Gypsum Panel Products or ASTM C840, Standard Specification for Application and Finishing of Gypsum Board. For fire-resistance-rated applications, refer to the published UL Design or GA File Number.

Maximum Framing Spacing for Single-Layer Application

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls 15.9 mm		Parallel	600 mm
		Perpendicular	600 mm

Maximum Framing Spacing for Multi-Layer Application Without Adhesive Between Layers

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	15.9 mm	Parallel	600 mm
		Perpendicular	600 mm

Consult USG Middle Fast technical team for the framing spacing if fire.

FINISHING AND DECORATING

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing products.

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. Gypsum Association's GA-214, Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration. All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with USG Sheetrock® Brand finishing products or with an undiluted, interior latex flat paint with high-solids content. Allow to dry before decorating. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural lighting, or will be decorated with a gloss paint (eggshell, semigloss or gloss), the gypsum panel should be skim coated with joint compound. This equalizes suction and texture differences between the drywall face paper and the finished joint compound before painting. When a Level 5 finish is required, use USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer.

TEST DATA

Property		ASTM Test Method	Requirement	UL Type ULX
Noncombustibility		E136	Noncombustible	Pass
Surface-burning characteristics	Flame Spread	E84	Flame Spread Index, not greater than 25 ¹	15
	Smoke Developed	E84	-	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness (lbf)	Field	C473 (B)	Not less than 11 lbf	Meets
	End	C473 (B)	Not less than 11 lbf	Meets
	Edge	C473 (B)	Not less than 11 lbf	Meets
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 46 lbf	Meets
	Perpendicular	C473 (B)	Not less than 147 lbf	Meets
Humidified deflection		C473	Not greater than 15.9 mm	Meets
Nail pull resistance (lbf)		C473 (B)	Not less than 87 lbf	Meets

PRODUCT DATA

	Sheetrock® Brand UltraLight Panels Firecode® Code X
Thickness	15.9 mm
Lengths ¹	2440
Width	1220 mm
Weight², nominal	9.3 kg/m²
Edges	Tapered
Packaging	Two panels per bundle

Notes:

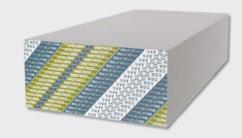
. Other sizes available by special order.

Represents approximate weight for design and shipping purposes.

COMPLIANC

- Comply with ASTM C1396 for 15.9 mm and Type X gypsum wallboard
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

SHEETROCK® BRAND GYPSUM BOARD ULTRA LIGHT



FEATURES & BENEFITS

Ultralightweight and sag-resistant 12.7 mm panels for interior wall and ceiling applications

- The industry's first lightweight 12.7 mm gypsum panels
- Superior score and snap for a cleaner edge and faster installation
- International Code Council® (ICC®) Evaluation Service compliant for ceiling installations, ESR-3365
- Comply with ASTM C1396, Standard Specification for Gypsum Board, for 12.7 mm gypsum wallboard and 12.7 mm gypsum ceiling board
- Underwriters Laboratories Inc. (UL) Classification as to surface-burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand UltraLight Panels are 12.7 mm gypsum panels that feature proprietary core and paper technologies, resulting in a high strength-to-weight ratio composite design. These lightweight panels are also engineered to have superior sag resistance, eliminating the need for traditional 12.7 mm sag-resistant ceiling panels. The noncombustible gypsum core is encased in 100% recycled face and back papers, and the face paper is folded around the long edges to reinforce and protect the core. The ends of the panels are cut square and even, while the the long edges are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems.

INTENDED FOR

- Commercial or residential applications where 12.7 mm panels are desired
- New or repair and remodel construction
- Non-fire-rated wood- or steel-framed wall and ceiling applications
- Parallel or perpendicular installation on ceilings with 610 mm OC framing when water based texture is applied

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 52°C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's GA-801, Handling and Storage of Gypsum Panel Products.

INTERIOR INSTALLATION

For maximum framing spacing in non-fire-resistance-rated applications of gypsum panel products, refer to Gypsum Association's GA-216, Specifications for the Application and Finishing of Gypsum Panel Products or ASTM C840, Standard Specification for Application and Finishing of Gypsum Board.

Maximum Framing Spacing for Single-Layer Application

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	12.7 mm	Parallel	600 mm
		Perpendicular	600 mm
Walls 12.7 mm		Parallel	600 mm
		Perpendicular	600 mm

Maximum Framing Spacing for Multi-Layer Application Without Adhesive Between Layers

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	12.7 mm	Parallel	600 mm
		Perpendicular	600 mm
Walls	12.7 mm	Parallel	600 mm
		Perpendicular	600 mm

Notes:

Consult USG Middle East technical team for the framing spacing if fire rating required.

FINISHING AND **DECORATING**

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing products.

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. Gypsum Association's GA-214, Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with USG Sheetrock® Brand finishing products or with an undiluted, interior latex flat paint with high-solids content. Allow to dry before decorating. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural lighting, or will be decorated with a gloss paint (eggshell, semigloss or gloss), the gypsum panel should be skim coated with joint compound. This equalizes suction and texture differences between the drywall face paper and the finished joint compound before painting. When a Level 5 finish is required, use USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer.

FINISHING AND DECORATING

Fastener Spacing, Single-Layer Over Metal Framing

rasteller Spacing, Single Layer Over Metal Framing				
Fastener Type	Location	Maximum Spacing		
Nails, 32 mm annular ring 5d drywall nail complying with ASTM C514, Standard Specification for Nails for	Ceilings	180 mm		
the Application of Gypsum Board	Walls	200 mm		
Screws, 32 mm Type W bugle head complying with	Ceilings	300 mm		
ASTM C1002, Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs	Walls	400 mm		
Screws (same as above)	RC-1, ceilings or walls	300 mm		
Adhesive¹ with nails or screws (same as above)	Ceilings, long edges perpendicular to framing members	410 mm at ends, one fastener per framing member at edges, one fastener in center of panel		
	Walls, long edges perpendicular to framing members	410 mm at ends, one fastener per framing member at edges, one fastener in center of panel		
	Walls, long edges parallel to framing members	410 mm) along edges, one fastener per framing member at ends, one fastener in center of panel		

INSTALLATION

Property		ASTM Test Method	Requirement	UL Type ULX
Noncombustibility		E136	Noncombustible	Meets
Surface-burning characteristics	Flame Spread	E84	Flame Spread Index, not greater than 25¹	15
	Smoke Developed	E84	-	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness (lbf)	Field	C473 (B)	Not less than 11 lbf	Meets
	End	C473 (B)	Not less than 11 lbf	Meets
	Edge	C473 (B)	Not less than 11 lbf	Meets
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 36 lbf	Meets
	Perpendicular	C473 (B)	Not less than 107 lbf	Meets
Humidified deflection, gypsum wallboard		C473	Not greater than 32 mm ¹	Meets
Humidified deflection, gypsum ceiling board		C473	Not greater than 8 mm ¹	Meets
Nail pull resistance (lbf)		C473 (B)	Not less than 77 lbf	Meets

Notes:

1. Per ASTM C1396 for 12.7 mm gypsum wallboard and gypsum ceiling board.

PRODUCT DATA

	Sheetrock* Brand Gypsum Board Ultra Light
Thickness	12.7 mm
Lengths ¹	2440
Width	1220 mm
Weight², nominal	6.1 kg/m²
Edges	Tapered
Packaging	Two panels per bundle

- Other sizes available by special order.
 Represents approximate weight for design and shipping purposes.

COMPLIANCE

- Comply with ASTM C1396 for 1/2 in. (12.7 mm) gypsum wallboard and 1/2 in. (12.7 mm) gypsum ceiling board
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to surface-burning characteristics and non-combustibility
- Comply with the requirements of the International Building Code® (IBC®) and International Residential Code (IRC) as both regular wallboard and ceiling board
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)
- ICC® Evaluation Service compliant for ceiling installations, ESR-3365

^{1.} In order to minimize or eliminate the occurrence of raised protrusions or screw buttons, USG recommends the installer confirm that the adhesive has fully cured, has stopped shrinking and has stabilized prior to finishing the panel.

SHEETROCK® BRAND GLASS-MAT PANELS MOLD TOUGH™



FEATURES & BENEFITS

High-performance Interior Wall Panels with Moisture and Mold Resistance

- Suitable for use in pre-dry-in and similar applications of wallboard before the building envelope is fully enclosed (ie: semi-exposed, or when the facade or roof is not fully enclosed)
- For use in interior applications where glass-mat gypsum panels are desired
- Features an inorganic fiberglass face and back
- Can be used in protected exterior soffit applications
- Scores and snaps easily for quick installation
- Installs and finishes similar to standard drywall
- UL Classified as to fire resistance, surface-burning characteristics and noncombustibility

DESCRIPTION

USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ are high performance interior panels for new construction or renovation work. The panels have a non-combustible moisture- and mold-resistant core encased in a moisture-resistant fiberglass mat that sheds water and features tapered long edges for easy finishing. The facer mat is colored to match traditional drywall and is engineered to accept the application of USG finishing systems. The back mat features USG 's distinctive green color. The 15.9mm Firecode™ X is UL Classified for fire resistance and can be used in any UL designs where Type SGX panels are listed.

ADVANTAGES

Mold-resistant: Scores a 10 (highest) when tested in accordance with ASTM D3273. **Resists Water:** Water-resistant gypsum core with water-shedding glass-mat on both sides.

Quick Installation: Simple score-and-snap, with no sawing or special tools required. Please see "USG Sheetrock® Brand Gypsum Panels Installation Guide", for more information on the installation of gypsum panels.

Warranted Performance: USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ can be exposed to weather for up to 12 months and are guaranteed for three years against manufacturing defects. See warranty for details.

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50°C.
- 2. Maximum framing spacing is 610mm centers.
- 3. Intended for interior applications only and must be kept dry during handling and storage. Please see "Storage and Handling", and GA-216 and ASTM C840 for handling and installation guidelines, including minimum 6.4mm gap from floor.
- 4. In pre-rock applications, temporary exposure to conditions such as wind pressure and moisture may influence the selection and spacing of fasteners and/or framing.
- 5. USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ offer resistance to normal weather conditions but are not intended for constant exposure to water. Protect from immersion in water and the eroding effects of cascading water.
- The building must be dried-in prior to installation in soffits and other horizontal applications.
- 7. 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.
- 8. Not suitable for use as a substrate for tile in wet areas such as tubs, showers, and gang showers, as well as other areas subject to direct water exposure. Use as a wall tile substrate is limited to tile installed according to current TCNA and ANSI specifications. Please consult with the adhesive and tile manufacturers for their recommendations for maximum size and weight parameters for use with gypsum board.

FINISHING AND DECORATING

For high-quality finishing results, USG recommends the following products:

- USG Sheetrock® Brand Base Compounds
- USG Sheetrock® Brand Setting-Type Joint Compounds
- USG Sheetrock® Brand Joint Tape
- USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer

Panels should not be finished until building is completely enclosed. The nature of the texture and absorption properties of the panel will require an additional skim coat on the entire panel surface with joint compound in most applications. Additionally, an aesthetic benchmark or mock-up is recommended for establishing and demonstrating an approved finishing system to coordinate the expectations of the design professionals with those of the contracted workforce. The finished appearance of the constructed standard should be approved in advance of any widespread work.

Painting products and systems used should comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with an undiluted interior latex flat paint with high-solids content. Allow to dry before decorating.

PRODUCT DATA

	Regular
Thickness	12.7 mm
Lengths ¹ and Width	1220x2440 mm
Weight², nominal	9.8 kg/m²
Linear expansion with moisture change, in mm/	6.25 x 10 ⁻⁶
mm %RH	
Coefficient of thermal expansion, (mm/°C)	15.3 x 10 ⁻⁶
Flexural strength, parallel, lbf. (N)	>80 (356)
Flexural strength, perpendicular, lbf. (N)	>100 (444)
R Value2, ft2·°F·hr/BTU (m2·K /W)	0.5
Combustibility	Non-combustible
Nail pull resistance, lbf. 3, 4 (N)	>80 (356)
Hardness core, edges and ends, lbf. (N)	>15 (67)
Water absorption (% of weight)	<5
Surface water absorption	<1.6 grams
Surface burning characteristics (per ASTM E 84 or	0/0
CAN/ULC-S102): flame spread/smoke developed	
Humidified deflection, mm	<6.4
Bending radius, mm	2440

Notes::

- Other sizes available by special order.
- Represents approximate weight for design and shipping purposes.

TEST DATA

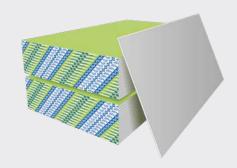
Moisture and Mold Resistance: USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ resist moisture and mold, and comply with ASTM C1658 section 7.1.4 for water resistance. Per ASTM C473, the average water absorption for panels is not greater than 5 percent by weight after a two-hour immersion. In independent lab tests conducted on 15.9mm USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ at the time of manufacture per ASTM D3273, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber", the panel score

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products form water exposure during storage and installation, and after completion of the building. This can be accomplished by using good design and construction practices.

COMPLIANCE

USG Sheetrock® Brand Glass-Mat Panels Mold Tough™ comply

- with ASTM C 1658 section 7 and ASTM C 1177
- Per ASTM E136, non-combustible gypsum core
- Surface burning characteristics per ASTM E84: flame spread is 0, smoke developed is 0
- Qualifies as a low VOC-emitting material



SHEETROCK® BRAND GLASS-MAT PANELS MOLD TOUGH® AR FIRECODE® X

FEATURES & BENEFITS

15.9 mm glass-mat Type X panels with abuse, moisture and mold resistance

- Feature a noncombustible, moisture-resistant gypsum core encased in a fiberglass face and back that shed water
- Designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 15.9 mm USG Sheetrock® Brand Glass-Mat Panels Mold Tough® Firecode® X
- Suitable for use in pre dry-in (fast track or pre-rock) and similar applications of panels before the building envelope is fully enclosed
- Quick score-and-snap, no sawing or special tools required
- Comply with ASTM C1658, Standard Specification for Glass Mat Gypsum Panels, for 15.9 mm, Type X and glass-mat water-resistant gypsum panel
- Tested to ASTM C1629, Standard Classification for Abuse-Resistant Non-decorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels, for surface abrasion and indentation resistance, and soft- and hard-body impact
- Score a "10" when tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber
- Can be exposed to weather for up to 12 months and are guaranteed three years against manufacturing defects
- Underwriters Laboratories Inc. (UL) Classification as to fire resistance, surface burning characteristics and non-combustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

DESCRIPTION

USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X (UL Type AR) are 15.9 mm Type X panels designed and tested to offer greater resistance to surface abrasion, indentation and impact damage than 15.9 mm USG Sheetrock® Brand Glass-Mat Panels Mold Tough® Firecode® X. These abuse-resistant panels feature a non-combustible, moisture resistant gypsum core that is encased in a green colored fiberglass face and back that shed water. When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels score a "10" (highest). The fiberglass face is folded around the long edges to reinforce and protect the core, and the ends are cut square and even. The long edges of the panels are tapered, allowing joints to be reinforced and concealed with USG Sheetrock® Brand joint treatment systems. The panels are UL Classified for fire resistance and can be used in any UL Design in which Type AR panels are listed.

INTENDED FOR

- Commercial or residential applications where 15.9 mm moisture- and mold-resistant Type X panels with greater resistance to surface abrasion, indentation and impact damage are required
- Areas where additional abuse resistance is desired
- Areas where glass-mat panels are desired
- Load-bearing and non-load-bearing wood- or steel-framed fire-rated walls
- New or repair and remodel construction

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 52°C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's GA-801, Handling and Storage of Gypsum Panel Products.

- 4. For abuse-resistant construction over steel stud framing, minimum 20-gauge (0.752 mm base metal thickness) steel studs, as defined by the Steel Stud Manufacturers Association (SSMA), are recommended.
- 5. Not intended for exterior applications or constant exposure to water. Protect from immersion in water and the eroding effects of cascading water.
- 6. Building must be dried-in prior to installation in soffits and other horizontal applications. Wall cavities, floor cavities and other enclosed areas, including insulation, must be dry prior to being closed-up and application of interior finishing.
- 7. Not suitable for use as a substrate for tile in wet areas such as tubs and showers, gang showers, and other areas subject to direct water exposure.
- 8. Use as a wall tile substrate is limited to tile installed according to current TCNA and ANSI specifications. Consult with adhesive and tile manufacturers for recommendations for maximum size and weight parameters for use with gypsum panels.

INTERIOR INSTALLATION

For maximum framing spacing in non-fire-resistance-rated applications of gypsum panel products, refer to Gypsum Association's GA-216, Specifications for the Application and Finishing of Gypsum Panel Products or ASTM C840, Standard Specification for Application and Finishing of Gypsum Board. For fire-resistance-rated applications, refer to the published UL Design or GA File Number.

Maximum Framing Spacing for Single-Layer Application

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls 15.9 mm		Parallel	600 mm
		Perpendicular	600 mm

Maximum Framing Spacing for Multi-Layer Application Without Adhesive Between Layers

Location	Panel Thickness	Gypsum Board Orientation to Framing	Maximum Frame Spacing OC
Ceilings ¹	15.9 mm	Parallel	400 mm
		Perpendicular	600 mm
Walls	15.9 mm	Parallel	600 mm
		Perpendicular	600 mm

Notes

 On ceilings to receive water-based texture material, 15.9 mm gypsum board shall be applied either parallel to framing spaced at 400 mm OC or perpendicular to framing spaced maximum 600 mm OC. See Appendix A.3 of Gypsum Association's GA-216, Specifications for the Application and Finishing of Gypsum Panel Products for more information.

USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X are by design stronger and have greater surface hardness than standard 5/8 in. (15.9 mm) Type X panels. Because of this, they are heavier and will be more difficult to install. Slower installation production rates should be accounted for in job planning. Installing USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X on steel thinner than 20-gauge (minimum 0.0296 in. [0.752 mm] base metal thickness), as defined by the SSMA, may result in increased fastener strip-out, improper screwhead seating or other related conditions.

FINISHING AND DECORATING

For high-quality finishing results, USG recommends USG Sheetrock® Brand finishing products.

The nature of the texture and absorption properties of the panel will require an additional skim coat of the entire panel surface with joint compound in most applications. Additionally, an aesthetic benchmark or mock-up is recommended for establishing and demonstrating an approved finishing system to coordinate the expectations of the design professionals with those of the contracted workforce. The finished appearance of the constructed standard should be approved in advance of any widespread work.

Painting products and systems should be used that comply with recommendations and requirements in Appendices of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. Gypsum Association's GA-214, Recommended Levels of Finish for Gypsum Board, Glass Mat and Fiber-Reinforced Gypsum Panels should be referred to in order to determine the level of finishing needed to ensure a surface properly prepared to accept the final decoration.

All surfaces, including applied joint compound, must be thoroughly dry, dust-free and not glossy. Prime with USG Sheetrock® All Purpose Joint Compound. Allow to dry before decorating. To improve fastener concealment where gypsum panel walls and ceilings will be subjected to critical artificial or natural lighting, or will be decorated with a gloss paint (eggshell, semigloss or gloss), the gypsum panel should be skim coated with joint compound. This equalizes suction and texture differences between the fiberglass face and the finished joint compound before painting. When a Level 5 finish is required, use USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer.

INSTALLATION

Property		ASTM Test Method	Requirement	UL Type AR
Noncombustibility		E136	Noncombustible	Meets
Surface-burning characteristics	Flame Spread	E84	Flame Spread Index, not greater than 25¹	0
	Smoke Developed	E84	-	0
	Class A	E84	Flame spread not greater than 25 and smoke developed not greater than 450	Meets
Core hardness (lbf)	Field	C473 (B)	Not less than 15 lbf	Meets
	End	C473 (B)	Not less than 15 lbf	Meets
	Edge	C473 (B)	Not less than 15 lbf	Meets
Flexural strength (lbf)	Parallel	C473 (B)	Not less than 100 lbf	Meets
	Perpendicular	C473 (B)	Not less than 140 lbf	Meets
Humidified deflection, gypsum wallboard		C473	Not greater than 6 mm ¹	Meets
Nail pull resistance (lbf)		C473 (B)	Not less than 90 lbf	Meets

MOISTURE AND MOLD RESISTANCE

Per ASTM C473, Test Methods for Physical Testing of Gypsum Panel Products, the average water absorption for USG Sheetrock® Brand Glass-Mat Panels Mold Tough® AR Firecode® X is not greater than 5% by weight after two-hour immersion. In independent lab tests conducted per ASTM D3273 at the time of manufacture, the panels meet or exceed ASTM C1396 specifications. This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most costeffective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

PRODUCT DATA

	Sheetrock* Brand Glass-Mat Panels Mold Tough* AR Firecode* X	
Thickness	15.9 mm	
Lengths ¹	2440-3660 mm	
Width	1220 mm	
Weight², nominal	13.7 kg/m²	
Edges	Tapered	
Packaging	Two panels per bundle	

- 1. Other sizes available by special order.
- 2. Represents approximate weight for design and shipping purposes.

ABUSE RESISTANCE

Fastener Spacing, Single-Layer Over Metal Framing

Test Standard	Test Summary	ASTM C1629 Classification Levels	Test Results
Abrasion Resistance ASTM D4977	A sample is placed under a wire brush weighted with 11.3 kg. The brush is then cycled 50 times back and forth across the surface. This creates surface wear that is measured to determine the level of abrasion resistance.	Maximum Depth Level 1 = 3.2 mm Level 2 = 1.5 mm Level 3 = 0.3 mm	Level 2 ¹
Indentation Resistance ASTM D5420	A 0.91 kg weight is raised to a 914 mm) height and dropped onto a 15.9 mm hemispherical die that strikes the sample with 72 in•lb (12.6 J) of force. The depth of the indentation is measured to determine the level of indentation resistance.	Maximum Depth Level 1 = 3.8 mm Level 2 = 2.5 mm Level 3 = 1.3 mm	Level 2
Soft-Body Impact Resistance ASTM C1629	A 27.2 kg leather bag is suspended on a rope and raised away angularly from a sample installed on 38 x 89 mm metal framing 406 mm OC. The bag is raised (152 mm increments) and released to impact the sample. The impact energy is calculated based upon the bag weight and drop height where structural failure occurs.	Minimum ft•lbf (structural failure) Level 1 = 90 ft•lbf (122 J) Level 2 = 195 ft•lbf (265 J) Level 3 = 300 ft•lbf (408 J)	Level 3
Hard-Body Impact Resistance ASTM C1629	A 610 x 610 mm sample is mounted vertically to a metal frame and impacted with a 70 mm diameter weighted swinging ram (resembling a sledgehammer). Weight is added in 1.1 kg increments to increase the impact force. Failure energy is determined when penetration through the face into the frame cavity occurs.	Minimum ft*lbf (structural failure) Level 1 = 50 ft*lbf (68 J) Level 2 = 100 ft*lbf (136 J) Level 3 = 150 ft*lbf (204 J)	Level 4

COMPLIANCE

- Comply with ASTM C1658 for 15.9 mm, Type X and glass-mat water-resistant gypsum
- Meet ASTM C1629 classification for abuse-resistant gypsum panels
- Classified as a Class A Interior Finish Material per Section 803.1 of the International Building Code® (IBC®)
- UL Classification as to fire resistance, surface-burning characteristics and noncombustibility
- Achieved GREENGUARD Gold Certification and qualifies as a low VOC emitting material (meets CA 01350)

Notes:
1. Per ASTM C1658 for 15.9 mm glass mat gypsum panels.

USG testing demonstrates that when painted with one coat of primer and two coats of semigloss latex paint, the abrasion resistance increases to Level 3.

SHEETROCK® BRAND GYPSUM **LINER PANELS**



FEATURES & BENEFITS

Shaft liner panels with moisture-resistance

- Scores and snaps easily; no special handling required.
- UL Classified for fire resistance, surface burning characteristics and noncombustibility.
- Comprehensive product and system testing assures long-term performance and safety.

USG Sheetrock® Brand Gypsum Liner Panels have a non-combustible gypsum core that is encased in a moisture-resistant, 100 percent recycled green face and back paper. The panels are UL/ULC Classified for fire resistance (Type SLX) and feature double beveled edges for easy installation.

Note: USG Sheetrock® Brand Gypsum Liner Panels, as identified in this document, have been tested for fire resistance, structural and acoustical performance with USG Sheetrock® Brand Shaft Wall and Area Separation Wall Systems framing components. When used together, USG Sheetrock® Brand Shaft Wall and Area Separation Wall System components ensure superior system performance and safety. If alternative system components are used with USG Sheetrock® Brand Liner Panels, the manufacturer(s) of the substituted component(s) should be consulted to confirm system performance properties.

INTENDED FOR

- Elevator shafts
- Service risers
- Stair shafts
- · Horizontal shafts wall ceiling

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50°C.
 - 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
 - 3. Nonload-bearing.
 - 4. Consult USG Middle East technical team for the framing spacing.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

Size:

Panels are 25.4 mm thick x 610 mm wide and available in 2440, 3050 and 3660 mm lengths.

Weight:

Approx. 22.3 kg/m².

Labeling:

Each panel bears the Underwriters Laboratories, Inc. Mark as evidence of UL Classifications as to fire resistance, surface burning characteristics and noncombustibility.

The product test results listed below ensure that products will perform as intended when designed, specified, installed and maintained according to our printed recommendations as a component of USG Sheetrock® Brand Cavity Shaft Wall System or USG Sheetrock® Brand Area Separation Wall System.

Flexural Strength:

Parallel	Perpendicular	R Value
35 kg per ASTM test	105 kg per ASTM test	0.65, per ASTM test
method C473	method C473	method C518

COMPLIANCE

USG Sheetrock® Brand Gypsum Liner Panels comply with ASTM C1396. Per ASTM E136 test methods, gypsum core UL classified as noncombustible. Per ASTM E84, flame spread is 20; smoke developed is 0.

SHEETROCK® BRAND MOLD **TOUGH® GYPSUM LINER PANELS**



FEATURES & BENEFITS

High-performance panels with moisture- and mold-resistance

- Specially designed and engineered for fire resistance rated assemblies
- UL Classified as to fire resistance, surface burning characteristics and noncombustibility
- Comprehensive product and system testing assures long-term performance and safety

USG Sheetrock® Brand Mold Tough® Gypsum Liner Panels have a noncombustible, moisture- and mold-resistant gypsum core that is encased in moisture- and moldresistant, 100 percent recycled blue face and back papers. The panels are UL Classified as to fire resistance (Type SLX) and feature double beveled edges for easy installation. Panel may be substituted for USG Sheetrock® Brand Gypsum Liner Panels in all Shaft Wall and Area Separation Firewall systems.

Note: USG Sheetrock® Brand Mold Tough® Gypsum Liner Panels, as identified in this document, have been tested for fire resistance, structural and acoustical performance with USG Sheetrock® Brand Shaft Wall and Area Separation Wall Systems framing components. When used together, USG Sheetrock® Brand Shaft Wall and Area Separation Wall System components ensure superior system performance and safety. If alternative system components are used with USG Sheetrock® Brand Mold Tough® Liner Panels, the manufacturer(s) of the substituted component(s) should be consulted to confirm system performance properties

INTENDED FOR

- Elevator shafts
- Service risers
- Stair shafts
- Horizontal shafts wall ceiling

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50°C.
 - 2. Avoid exposure to excessive, repetitive or continuous moisture before, during and after installation. Eliminate sources of moisture immediately.
 - 3. Nonload-bearing.
 - 4. Consult USG Middle East technical team for the framing spacing.

FINISHING AND DECORATING

For priming and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand All Purpose Joint Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG All Purpose Joint Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

PRODUCT DATA

Panels are 25.4 mm thick x 610 mm wide and available in 2440, 3050 and 3660 mm lengths.

Weight:

Approx. 20.1 kg/m²

Labeling:

Each panel bears the Underwriters Laboratories, Inc. Mark as evidence of UL Classifications as to fire resistance, surface burning characteristics and noncombustibility.

Moisture and Mold Resistance

- Per ASTM C473 test method, the average water absorption for panels is not greater than 5 percent by weight after two-hour immersion.
- When tested in accordance with ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panels meet or exceed ASTM C1396 specifications.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

COMPLIANCE

USG Sheetrock® Brand Mold Tough® Gypsum Liner Panels comply with:

- ASTM C1396.
- ASTM E136 test methods, noncombustible gypsum core.
- ASTM E84 test method, Class A, flame spread index of 20 and smoke developed index of 0.



SECUROCK™ BRAND GLASS-MAT SHEATHING



FEATURES & BENEFITS

Quality, High-performance Sheathing for Warranted Protection from the Elements

- · Treated gypsum core, combined with fiberglass face and back, offers exceptional water
- · High resistance to mold and mildew, scoring a 10 (highest) when tested in accordance with ASTM D3273. Glass-Mat Sheathing facer on both sides' sheds water
- Quick score and snap, with neither sawing or special tools nor rapid screws or nail attachments required
- · For use in most exterior systems when properly detailed by exterior finish manufacturer
- Meets or exceeds the requirements of ASTM C1177
- Can be exposed to weather for up to 12 months after application.
- USG Securock™ Glass-Mat Sheathing is guaranteed for five years against manufacturing defects and for 12 months of weather exposure.

DESCRIPTION

USG Securock™ Brand Glass-Mat Sheathing is a non-combustible, moisture- and moldresistant panel designed for use under exterior claddings where conventional gypsum sheathing products have traditionally been used, such as brick veneer, properly detailed Exterior Insulation Finish Systems (EIFS), Direct-applied Exterior Finishing System (DEFS), metal panel finishing, clapboard siding, shingle siding, shake siding and conventional stucco.

INTENDED FOR

- Exterior Cladding
- High moisture areas
- Commercial or residential applications where water resistant panels with greater resistance to surface abrasion, indentation and impact damage are required
- · Areas where glass-mat panels are desired
- Load-bearing and non-load-bearing steel-framed fire-rated walls
- New or repair and remodel construction

- LIMITATIONS 1. USG Securock™ Glass-Mat Sheathing shall not be used for exterior cladding without proper installation system.
 - 2. Specific requirements regarding framing spacing, fastener spacing and fastener specifics to provide required lateral wind-load resistance are the responsibility of the design professional.
 - 3. USG Securock™ Glass-Mat Sheathing offers resistance to weather but is not intended for constant exposure to water. Protect this and all similar materials from the eroding effects of cascading water. If extreme weather conditions are possible, the design professional should consider recommending that panel joints be treated or a weather resistant barrier be installed.
 - 4. Not recommended for lamination to masonry surfaces. Use furring strips or framing.
 - 5. Maximum stud spacing is 600mm centers.
 - 6. USG Securock™ Glass-Mat Sheathing is not a finished surface.

DELIVERY AND STORAGE OF MATERIALS

All materials shall be stored in an enclosed shelter providing protection from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from the premises. Prior to installation, panels should be stacked flat (unless the contractor in charge of site safety directs otherwise to avoid point overloading of the structure or a tripping hazard) and reasonably protected from the elements.

Warning: Store all USG Securock™ Glass-Mat panels flat. Panels are heavy and can fall over, causing serious injury or death. Do not move unless authorized. Panels 3660mm in length will be in banded units. To ensure safety and performance of the product, use of a forklift truck with ship minimum (900mm) span between the forks when moving the banded units is recommended. Keep the nylon bands on each lift until individual boards are moved.

PRODUCT DATA

	12.7 USG Securock™ Brand Glass-Mat Sheathing	15.9 USG Securock™ Brand Glass-Mat Sheathing Firecode™ X
Dimension ¹	1220x2440mm	1220x2440mm
Weight², nominal kg/m²	10.7 kg/m ²	10.5 kg/m ²
Edge Configuration	Square edges	Square edges
Linear expansion with moisture change, in mm/	6.25 x 10 ⁻⁶	6.25 x 10 ⁻⁶
Coefficient of thermal expansion, mm/mm/°C	15.3 x 10 ⁻⁶	15.3 x 10 ⁻⁶
Flexural strength, parallel, lbf. (N)	>80 (356)	>100 (444)
Flexural strength, perpendicular, lbf. (N)	>107 (476)	>147 (653)
R Value2, ft2·°F·hr/BTU (m²·K /W)	0.40	0.50
Combustibility	Non-combustible	Non-combustible
ASTM D3273 Score	10/10	10/10
Density	843 kg/m ³	660 kg/m³
Surface burning characteristics (per ASTM E 84 or	0/0	0/0
CAN/ULC-S102): flame spread/smoke developed		
Humidified deflection, mm	<6.4	<3.0
Bending radius, mm	2750	2750

- Other sizes available by special order
- Represents approximate weight for design and shipping purposes.

COMPLIANCE

Securock[™] Brand Glass-Mat Sheathing comply with:

- Meets or exceeds the physical property requirements of ASTM C1177. 15.9mm USG Securock™ Glass-Mat Sheathing is UL Classified as to fire resistance, surface burning characteristics and core combustibility. ICCES Evaluation Report ESR 3044.
- USG Securock™ Glass-Mat Sheathing has a noncombustible core when tested in accordance with ASTM E136. Surface burning characteristics - Flame spread: 0, and smoke developed: 0, when tested in accordance with ASTM E84. Fire resistance — 15.9mm panels meet the requirements of Type X as defined in ASTM C1396 and ASTM C1177 when tested in accordance with ASTM E119. UL Classified as to fire resistance. See Underwriters Laboratories Fire Resistance Directory for specific designs.
- Tensile Bond: Exceeds 15 psi requirements for both cementitious and acrylic adhesives
- USG Securock[™] Glass-Mat Sheathing resists moisture and mold, and complies with ASTM C1177 for water resistance. In independent lab tests conducted on USG Securock™ Glass-Mat Sheathing at the time of manufacture per ASTM D3273, Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be affected by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation, as well as after completion of the building. This can be accomplished by using good design and construction practices

INSTALLATION

Allowable Uniform Wind Load:

Frame Spacing	300mm		400mm		600mm				
Fastener Spacing	100mm					200mm	100mm	100111111	
12.7mm-Thick Panels Allowable Pressure kg/m²	17.5	10.7	7.8	12	8	6	6	4.5	3.7
15.9mm-Thick Panels Allowable Pressure kg/m²	25	15.7	11.7	17.5	11.7	8.9	8	6.3	5.6

Applicable for both steel and metal framing. The values in this table are based on testing per ASTM E330 and represent the capacity of the sheathing to resist flexural failure or fastener pull-through with a 3.0 factor of safety. Capacities are based on a minimum fastener head diameter of 8.3mm (#6 bugle head screw). The withdrawal resistance of fasteners from framing is different on several factors, including but not limited to fastener type, fastener length and framing properties. The specification of fasteners is the responsibility of the Designer of Record. Manufacturer's recommendations are given below. These capacities assume continuous support of each stud flange over the full length of the sheathing panel. Allowable pressures are based on a maximum deflection limitation of L/360. Consult USG representative for higher deflection limitations. Allowable pressure values are for short-term wind loads. Framing design is independent of these values. The design capacities of assemblies constructed with pneumatically driven fasteners are beyond the scope of this submittal sheet.

Soffits Sheathing Application

- The maximum frame spacing for soffits is 400mm centers when installed parallel to the joists and 600mm centers when installed perpendicular to the joists.
- Maximum fastener spacing for horizontal surface (soffits) is 200mm centers.

Wall Sheathing

- Apply weather-resistive or water barriers and flashing as required by and in accordance with the applicable local code requirements and the recommendations of the exterior cladding manufacturer, whichever is more stringent.
- Maximum fastener spacing for vertical surfaces is 200mm centers, unless limited by wind load restrictions or steel stud racking resistance requirements outlined in Product Data.
- Maximum frame spacing is 600mm centers.
- Sheathing must be thoroughly dry prior to installing adhesively applied or selfadhered ice/water barriers and joint tape. Failure to do so will result in an insufficient bond to the sheathing.
- Apply side labeled "USG Securock™" toward exterior. Fit ends and edges closely but do not force them together.
- Fasteners shall be driven flush with the panel surface, without countersinking or going deep enough to break the glass mat, and into the framing.
- Unless otherwise specified or required, USG Securock™ Glass-Mat Sheathing may be applied either perpendicular or parallel to steel framing.
- Screws 32mm or 41mm #6 bugle head corrosion resistant fasteners. Where sheet-type, weather-resistive barriers or self-adhering membranes are placed over the sheathing, corrosion resistance shall be equal to or greater than a hot-dipped, galvanized coating of 460g/m² of surface area. Where liquid or fluid-applied air and water barriers are used, or where no sheet-type, weather-resistive barriers are used over the sheathing, screws shall have a corrosion resistance of more than 800 hours per ASTM B117.
- Stainless steel fasteners shall be used in coastal or aggressive environments. Consult the building code for other requirements.

Control Joints

 Control joints shall be installed at building expansion joints. Location and design of these control joints shall be detailed by the design professional. Per the International Building Code (IBC), the distance between control joints shall not be more than 9144mm.

Shear- or Fire-rated Construction

• Shear- or fire-rated construction may have additional execution requirements as specified in local codes or the UL Fire Resistance Directory.

Weather-resistant Barriers

• No weather-resistant barrier is required for exposure warranty but may be required by local codes or cladding system specifications.

Exterior Cladding Application

• Consult exterior cladding manufacturer for installation instructions.

EIFS/DEFS

EIFS/DEFS, like all other cladding systems, is vulnerable to moisture that enters
the cavity through wall penetrations, such as windows, doors, deck attachments
and utility pipe chases, and at wall/roof intersections. For most residential and
some commercial EIFS/DEFS, manufacturers now specify a weather-resistive
barrier for additional protection from moisture that penetrates the wall. In addition,
manufacturers of windows, doors, flashing and sealants offer instruction on proper
installation and maintenance of their products.

Contact USG Middle East nearest sales office for full installation support and inspection.

SECUROCK® BRAND GYPSUM-FIBER ROOF BOARD



FEATURES & BENEFITS

High-performance gypsum-fiber roof board for use in low-slope commercial roofing systems

- Exceptional bond and low absorption in adhered systems
- Moisture- and mold-resistant
- Excellent wind-uplift performance
- Manufactured from 97% recycled material

USG Securock® Brand Gypsum-Fiber Roof Board is a high-performance roof board for use in low slope roofing systems. Its unique fiber-reinforced, uniform composition gives the panel strength and water resistance through to the core. USG Securock Gypsum-Fiber Roof Board provides exceptional bond and low absorption in adhered systems and, with uniform composition, achieves high wind-uplift ratings with no risk of facer delamination. Made from 97% recycled material, USG Securock Gypsum-Fiber Roof Board combines superior performance with sustainable design for all types of roofing systems, including single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

ADVANTAGES

Exceptional Strength: Engineered to provide superior wind-uplift performance for a wide variety of roof assemblies. USG Securock Gypsum-Fiber Roof Board has uniform composition providing enhanced bond strength of membrane systems with no risk of facer delamination.

Fire Performance: Provides excellent fire performance and demonstrates exceptional surface burning characteristics [ASTM E84 (CAN/ULC-S102) Flame Spread 5, Smoke Developed 0].

Moisture and Mold: Uniform water-resistant core ensures excellent moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

Versatile: Can be used as a component in single-ply, fluid-applied, built-up, spray foam, metal and modified bitumen roofing.

Sustainability: Made from 97% recycled materials and has earned independent certification from Scientific Certification Systems for this achievement.

LIMITATIONS

- 1. USG Securock Gypsum-Fiber Roof Board is engineered to perform within a properly designed roof system. The use of USG Securock Gypsum-Fiber Roof Board as a roofing component is the responsibility of the design professional.
- 2. Consult roofing manufacturers for specific instructions on the application of their products to USG Securock Gypsum-Fiber Roof Board.
- 3. Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse effects on the performance of the roof system and are beyond the control of USG.
- 4. Keep USG Securock Gypsum-Fiber Roof Board panels dry before, during and after installation. USG Securock Gypsum-Fiber Roof Board should not be installed during rain, heavy fog and any other conditions that deposit moisture on the surface of the board. Apply only as much USG Securock Gypsum-Fiber Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or condensation.
- 5. For reroof or re-cover applications, existing roofing system must be dry throughout prior to application of USG Securock Gypsum-Fiber Roof Board.
- 6. Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- 7. USG Securock Gypsum-Fiber Roof Board should be stored flat and off the ground with protection from the weather. If stored outdoors, a breathable waterproof covering should be used.
- 8. When applying solvent-based adhesives or primers, allow sufficient time for the solvent to evaporate to avoid damage to roofing components.

- USG allows the bonding of cold mastic-modified bitumen and torching directly to the surface. Consult with the system manufacturer for recommendations on this application.
- USG recommends maximum asphalt application temperature for Type III asphalt of 455°F when using USG Securock Gypsum-Fiber Roof Board. Application temperatures above these recommended temperatures may adversely affect roof system performance.

PRODUCT DATA

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG Securock Gypsum-Fiber Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. Proper fastener spacing is essential to achieve wind-uplift performance.
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of USG Securock Gypsum-Fiber Roof Board. Butt board edges and ends loosely in typical installations.
- · Butt board edges and ends loosely (minimum 1.6mm gap on all edges) in typical installations. This gap may need to be larger depending on factors like the roof deck's size, membrane color, ultimate deck surface temperature and time of year the roof assembly is installed. Installations during temperatures below 50°F may require larger
- · Roof boards should never be installed frozen.
- See product data table below for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 12.7mm or 15.9mm panels should be used. Maximum framing spacing is 600mm.

FIRE PERFORMANCE

- UL Classified as to Surface Burning Characteristics and Non-combustibility in accordance with ASTM E84 (CAN/ULC-S102)-Flame Spread 5 and Smoke Developed 0
- 6.4, 9.5, 12.7 and 15.9mm thickness—Class A in accordance with UL790 (CAN/ ULCS107). See the UL Building Materials Directory for more information.
- 15.9mm thickness—Meets requirements of Type X per ASTM C1278 and may be used in P series designs as a thermal barrier.

SYSTEM PERFORMANCE

- FM Approved
- Complies with requirements of FM 4450 and FM 4470
- Meets FM Class 1

COMPLIANCE USG Securock Gypsum-Fiber Roof Board is manufactured to conform to ASTM C1278, "Standard Specification for Fiber-Reinforced Gypsum Panel."

TECHNICAL DATA

Property	6.5 mm	9.5 mm	12.7 mm	15.9 mm
Width	1220 mm	1220 mm	1220 mm	1220 mm
Length	2440 mm	2440 mm	2440 mm	2440 mm
Pieces per unit for 1220x2440mm	50	400	30	24
Weight, nominal kg/m²	7.7	9.6	13.5	3.20
Flexural strength, parallel, lbs. min. per ASTM C473	40	70	110	15.6
Compressive strength, psi nominal	1800	1800	1800	1800
Flute spannability per ASTM E661	100 mm	125 mm	200 mm	250 mm
Permeance, perms per ASTM E96	30	26	26	24
R Value per ASTM C518	0.2	0.3	0.5	0.6
Coefficient of thermal expansion, inches/inch • °F, per ASTM E831	8.0x10 ⁻⁶	8.0x10 ⁻⁶	8.0x10 ⁻⁶	8.0x10 ⁻⁶
Linear variation with change inmoisture, inches/inch • %RH, per ASTM D1037	8.0x10 ⁻⁶	8.0x10 ⁻⁶	8.0x10 ⁻⁶	8.0x10 ⁻⁶
Surface water absorption, nominal grams, per ASTM C473	10	10	10	10
Water absorption, % max, per ASTM C473	1.6	1.6	1.6	1.6
Mold resistance per ASTM D3273*	10	10	10	10

*ASTM D3273 Mold Resistance Testing: In independent lab tests conducted on USG Securock Glass-Mat Roof Board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

SECUROCK® BRAND **GLASS-MAT ROOF BOARD**

FEATURES & BENEFITS

when cutting

Moisture- and mold-resistant core and facer



DESCRIPTION

USG Securock® Brand Glass-Mat Roof Board is a high-performance roof board for use in low-slope commercial roofing systems. It enhances the durability of the entire roofing system when used as cover board in single-ply mechanically attached systems. Its specially treated core and high performance glass-mat facer provide protection against fire, mold and moisture.

• Unmatched mat-to-core tensile bond strength makes facer less likely to delaminate

High-performance glass-mat roof board for use in low-slope commercial roofing

• Ideal for use as cover board in single-ply mechanically attached systems

Provides protection to roof system from hail and foot traffic

High-quality tight mat makes for easier handling and cutting

• Fire-resistant for use as fire barrier and thermal barrier

ADVANTAGES Fire Performance: Meets Factory Mutual (FM) Class 1 and Underwriters Laboratories (UL) Class A fire ratings for unlimited slope in fire barrier applications per UL 790. Easier to Cut, Handle and Install: High-quality mat produces less itchiness than competitive products.

> **Moisture and Mold:** Fiberglass face and back with treated core provide moisture and mold resistance. Scored a maximum "10" for mold resistance on ASTM D3273.

- LIMITATIONS 1. USG Securock Glass-Mat Roof Board is engineered to perform within a properly designed roof system. The use of USG Securock Glass-Mat Roof Board as a roofing component is the responsibility of the design professional.
 - 2. Consult roofing manufacturers for specific instructions on the application of their products to USG Securock Glass-Mat Roof Board.
 - 3. Weather conditions, dew, application temperature, installation techniques and moisture drive can have adverse effects on the performance of the roof system and are beyond the control of USG.
 - 4. Keep USG Securock Glass-Mat Roof Board panels dry before, during and after installation. USG Securock Glass-Mat Roof Board should not be installed during rain, heavy fog and any other conditions that deposit moisture on the surface of the board. Apply only as much USG Securock Glass-Mat Roof Board that can be covered by final roof membrane system in the same day. Avoid exposure to moisture from leaks or
 - 5. For reroof or re-cover applications, existing roofing system must be dry throughout prior to application of USG Securock Glass-Mat Roof Board.
 - 6. Plastic or poly packaging applied at the plant to protect board during rail or other transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
 - 7. USG Securock Glass-Mat Roof Board should be stored flat and off the ground with protection from the weather. If stored outdoors, a breathable waterproof covering should be used.
 - 8. For systems not listed, please contact your local USG Securock roofing sales representative.

INSTALLATION

- Refer to roof system manufacturer's written instructions, local code requirements and Factory Mutual Global (FMG) and/or Underwriters Laboratories (UL) requirements for proper installation techniques.
- Use fasteners specified in accordance with above requirements. Install approved fasteners with plates into the USG Securock Glass-Mat Roof Board, flush with the surface. Fasteners should be installed in strict compliance with the roof system

- manufacturer's installation recommendations and FMG Loss Prevention Data Sheet 1-29. Proper fastener spacing is essential to achieve wind uplift performance.
- Locate edge joints on, and parallel to, deck ribs. Stagger end joints of adjacent lengths of USG Securock Glass-Mat Roof Board. Butt board edges and ends loosely in typical installations.
- Butt board edges and ends loosely (1.6mm gap on all edges) in typical installations. This gap may need to be larger depending on factors like the roof deck's size, membrane color, ultimate deck surface temperature and time of year the roof assembly is installed. Installations during temperatures below 50°F may require larger
- · Roof boards should never be installed frozen.
- See product data table below for maximum flute span when panels are applied directly over metal decking.
- For vertical parapet applications, only 12.7mm or 15.9mm panels should be used. Maximum framing spacing is 600mm.

PRODUCT DATA

- UL Classified as to Surface Burning Characteristics and Non-combustibility in accordance with ASTM E84 & E136 (CAN/ULC-S102 & S114).
- Flame Spread 0 and Smoke Developed 0
- Non-combustible Core
- 1/4", 1/2" and 5/8" thickness—Class A unlimited slope in accordance with UL790 (CAN/ULC-S107).
- 5/8" thickness—Meets requirements of Type X per ASTM C1177 and may be used in P series designs as a thermal barrier.

SYSTEM PERFORMANCE

- FM Approved
- Complies with requirements of FM 4450 and FM 4470
- Meets FM Class 1

COMPLIANCE

USG Securock Glass-Mat Roof Board is manufactured to conform to ASTM C1177.

TECHNICAL DATA

Property	7.4 mm	12.7	15.9 mm
Width	1220 mm	1220 mm	1220 mm
Length	2440 mm	2440 mm	2440 mm
Weight, nominal kg/m²	5.6	9.8	13.2
Flexural strength, parallel, lbs. min. per ASTM C473	40	80	100
Compressive strength, psi nominal	700-1000	700-1000	700-1000
Flute spannability per ASTM E661	100 mm	125 mm	200 mm
Permeance, perms per ASTM E96	18	18	16
R Value per ASTM C518	0.36	0.53	0.54
Coefficient of thermal expansion, inches/inch • °F, per ASTM E831	8.5x10 ⁻⁶	8.5x10 ⁻⁶	8.5x10 ⁻⁶
Linear variation with change in moisture, inches/inch • %RH, per ASTM D1037	6.3x10 ⁻⁶	6.3x10 ⁻⁶	6.3x10 ⁻⁶
Water absorption, % max, per ASTM C473	10	10	10
Mold resistance per ASTM D3273*	10	10	10

*ASTM D3273 Mold Resistance Testing: In independent lab tests conducted on USG Securock® Brand Gypsum-Fiber Roof Board and Glass-Mat Roof Board at the time of manufacture per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, both panels scored a 10. The ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

SECUROCK® BRAND GLASS MAT SHAFT WALL FIRECODE™ MOLD TOUGH™



FEATURES & BENEFITS

- · High-performance glass-mat panels with moisture and mold resistance for use in USG Middle East shaftwall and area separation wall systems
- Direct substitute for USG Sheetrock® Brand gypsum liner panels and USG Sheetrock® Brand Mold Tough™ gypsum liner panels when prolonged weather exposure is
- UL Classified as to fire resistance, surface burning characteristics and non combustibility
- · Comprehensive product and system testing ensures long-term performance and safety

Securock® Brand Glass Mat Shaft Wall Firecode™ have a non-combustible, moisture- and mold-resistant gypsum core that is encased in a moisture- and mold-resistant glass mat. The panels are UL Classified as to fire resistance (Type SLX) and feature double-beveled edges for easy installation. Panel may be substituted for USG Sheetrock® Brand gypsum liner panels and USG Sheetrock® Brand Mold Tough gypsum liner panels in all USG Middle East Sheetrock® Brand shaft wall and area separation wall systems.

Note: These Securock® Brand Glass Mat Shaft Wall Firecode™ have been tested for fire resistance, structural performance and sound control only when used with USG Sheetrock® Brand shaft wall and area separation wall framing components. All USG Sheetrock® Brand shaft wall and area separation wall system components must be used together to ensure superior system performance and safety. Substitutions of any components are not recommended and are not endorsed by USG Middle East.

INTENDED FOR

- Elevator shafts
- Service risers
- Stair shafts
- Horizontal shafts wall ceiling

ADVANTAGES

Mold-resistant: Scores a 10 (highest) when tested in accordance with ASTM D3273. Resists Water: Glass-Mat Sheathing facer on both sides sheds water.

Quick and Dry Installation: Quick score-and-snap, with no sawing or special tools needed.

Exposure: Can be exposed to weather for up to 12 months after application. **Warranted Performance:** Securock® Brand Glass Mat Shaft Wall Firecode™ is guaranteed for five years against manufacturing defects and has a 12-month limited-exposure warranty.

- **LIMITATIONS** 1. Avoid exposure to sustained temperatures exceeding 50°C.
 - 2. Securock® Brand Glass Mat Shaft Wall Firecode™ offer resistance to normal weather conditions but are not intended for constant exposure to water. Protect this and all similar materials from immersion in water and the eroding effects of cascading water.
 - 3. Non-load-bearing.
 - 4. Not for use in unlined air-supply ducts.

DECORATING

Finishing and decorating with paint, texture, or wallcovering, follow manufacturer's directions for materials used. All surfaces, including applied USG Middle East Sheetrock® Brand Base Compound, must be thoroughly dry, dust free, and not glossy. A prime coat of Sheetrock® Tuff-Hide Primer-Surfacer should be applied and allowed to dry before decorating when a Level 5 finish is required. To improve fastener concealment, where gypsum panel walls and ceilings will be subjected to strong artificial or natural side lighting and/or decorated with a gloss paint (eggshell, semi gloss, or gloss), the gypsum panel surface should be skim-coated with USG Middle East Sheetrock® Brand Base Compound or primed with Sheetrock® Tuff-Hide Primer-Surfacer to equalize suction before painting.

Moisture and Mold Resistance

Securock® Brand Glass Mat Shaft Wall Firecode™ comply with ASTM C1177 section 5.2.5 for water resistance.

In independent lab tests conducted on 25.4mm Securock® Brand Glass Mat Shaft Wall Firecode™ at the time of manufacture per ASTM D3273, "Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber," the panel score was 10.

This ASTM lab test may not accurately represent the mold performance of building materials in actual use. Given unsuitable project conditions during storage, installation or after completion, any building material can be overwhelmed by mold. To manage the growth of mold, the best and most cost-effective strategy is to protect building products from water exposure during storage and installation and after completion of the building. This can be accomplished by using good design and construction practices.

PRODUCT DATA

Size:

Panels are 25.4 mm thick x 610 mm wide and available in 2440, 3050 and 3660 mm

Weight:

Approx. 21.9 kg/m²

Labeling:

Each panel bears the Underwriters Laboratories, Inc. Mark as evidence of UL Classifications as to fire resistance, surface burning characteristics and noncombustibility.

COMPLIANCE

Securock® Brand Glass Mat Shaft Wall Firecode™ Mold Tough™ comply with:

- ASTM C1658, C1396
- ASTM E136, non-combustible gypsum core
- Surface Burning Characteristics: Class A, as defined in IBC Section 803.1 flame spread is 20 and smoke developed is 0, when tested in accordance with ASTM E84.



SOLIDROCK FIBER CEMENT BOARDS



FEATURES & BENEFITS

- Asbestos free
- Moisture resistant
- · Dimensional stability
- Non combustible; Non toxic
- Withstands weather changes for exterior application, and ideal for interior wet areas.

DESCRIPTION

Solidrock Fiber Cement Boards are made from a mix of cement, cellulose fiber and fire resistant fillers. The boards having an excellent resistance against fire, termite and moisture makes it ideal material for varying interior and exterior applications. The recycled contents in the product composition make it more environmental friendly. This product does not contain asbestos, formaldehydes or harmful chemicals. It is the best substitution to wood substrates solutions with a contemporary range of green products suitable for all types of constructions.

INTENDED FOR

- Exterior Envelopes
- Wall partitions
- Roof Underlay
- Ceilings
- Office cubical partitions
- Fixed Wardrobes
- Kitchen cabinets
- Duct Covering

LIMITATIONS

- 1. Avoid exposure to sustained temperatures exceeding 50 °C.
- 2. Avoid exposure to excessive, repetitive or continuous moisture before during and after installation. Eliminate sources of moisture immediately.
- 3. Must be stored off the ground and under cover in accordance with Gypsum Association's Handling and Storage of Gypsum Panel Products (GA-801-07). Sufficient risers must be used to support the entire length of the fiber cement board to prevent sagging.

INTERIOR INSTALLATION

Handling. The boards should always be handled by professional workers. At no time should the boards be lifted flat by one worker of its edges.

Cutting. Solidrock Fiber Cement Boards can be cut using normal tools as circular saw. **Spacing between boards and metal framing spacing.** Consult USG Middle East technical team for the framing spacing.

Fixing. Solidrock Fiber Cement Boards should be fixed at no less than 10mm from board edges to all framing members using proper screws. For partitions, fix the screws at maximum 300mm centers. For ceilings, fix the screws at 230mm maximum centers and at 150mm maximum centers at board ends.

FINISHING AND DECORATING

For high-quality finishing results, USG Middle East recommends the following products:

- Sheetrock® Base Compound
- Sheetrock® Fiberglass Tape
- USG Corner Beads and Trims
- Sheetrock® Tuff-Hide™ primer-Surfacer

Painting products and systems should be used which comply with recommendations and requirements in Appendixes of ASTM C840. For priming and decorating with paint, texture or wall covering, follow manufacturer's directions for materials used. All surfaces, including applied joint compound, must be thoroughly dry, dust free, and not glossy. Prime with Sheetrock® Tuff-Hide™ primer- Surfacer. Allow to dry before decorating.

To improve fastener concealment, where Solidrock Fiber Cement panel walls and ceilings will be subjected to severe artificial or natural side lighting and be decorated with a gloss paint (egg shell, semi-gloss or gloss), the Solidrock Fiber Cement Boards surface should be skim coated with Sheetrock® Base Compound. This equalizes suction and texture between the boards face paper and the finished joint compound before painting. As an alternative to skim coating, or when a Level 5 finish is required, use Sheetrock® Tuff-Hide™ primer- Surfacer.

PRODUCT DATA

	Solidrock Fiber Cement Boards
Standard size	1200x2400 mm
Thickness	6mm, 9mm, 12mm, 18mm
Density	≥1300 kg/m³
Moisture content	≤10%
PH value (acid-base)	8-9
Flexural strength	≥10 MPA
Impact strength	≥7.1 kg/m²*
Adhesion bond strength	≥ 7.9 kg/m ^{2**}
Thermal conductivity at 50 °C	≤0.21/W.mk
Asbestos content	Not detected
Formaldehyde content	Not detected

^{*} for 9mm Board ** for 12mm Board

COMPLIANCE

Solidrock Fiber Cement Boards comply with:

- ASTM C 1186: Type (A) Grade 1 Standard Specification for Flat Fiber Cement Boards
- BS 476: Part 7 Class 1

84 8:

FIBEROCK® BRAND AR INTERIOR PANELS



FEATURES & BENEFITS

Gypsum-fiber abuse-resistant panels outperform paper-faced gypsum board in abuse-prone areas

- No face paper to scratch or tear
- Resist denting, breaking and puncturing, even in high-traffic areas
- Provide excellent fire resistance
- Offer an economical alternative to concrete block and plaster construction
- Ideal for institutional, commercial and residential interiors
- Certified, recycled content of 97 percent

DESCRIPTION

USG Fiberock® Brand AR Interior Panels are engineered to provide increased resistance to abrasion, indentation and penetration for interior walls and ceilings in demanding construction applications. These gypsum- fiber panels are designed to outperform paper-faced gypsum board. Strong, solid and durable, they resist denting, breaking and puncturing— even in high-traffic areas. USG Fiberock AR Interior Panels are code approved for use in noncombustible construction. They have exceptional surface burning characteristics (ASTM E84, Flame Spread 5, Smoke Developed 0) and fire resistance (ASTM E119).

15.9 mm USG Fiberock AR Interior Panels may be used instead of Type X gypsum panels in over 50 fire-rated wall assemblies as listed in the UL Fire Resistance Directory.

PRODUCT DATA

Size (thickness x width x length)	Units (pcs.)
12.7 mm x 1220 mm x 2440 mm	30
12.7 mm x 1220 mm x 2745 mm	30
12.7 mm x 1220 mm x 3050 mm	30
12.7 mm x 1220 mm x 3660 mm	30
15.9 mm x 1220 mm x 2440 mm	24
15.9 mm x 1220 mm x 2745 mm	24
15.9 mm x 1220 mm x 3050 mm	24
15.9 mm x 1220 mm x 3660 mm	24

TECHNICAL DATA

Property	Unit of Measure	ASTM Test Method	15.9mm USG Fiberock® Brand AR Interior Panel	12.7mm USG Fiberock* Brand AR Interior Panel
Flexural Strength	lbf	C473	> 155	>110
Compressive	psi	n/a	> 500	>500
Strength Nail-Pull Resistance	lb (10 mm head diameter, dry)	C473	> 145	>120
Weight	kg/m²	C473	15.1	11.7
Mold Resistance	-	D3273	10 (no growth)	10 (no growth)
Surface-Burning Characteristics	flame/smoke	E84	5/0	5/0
Thermal	"R"/k value	C518	-	30/1.84

Compliance with Standards: Meets ASTM C1278.

Edge Configuration: Long edges tapered; ends cut square.

ABUSE-RESISTANT PERFORMANCE

ASTM C1629 Performance	Units (pcs.)
*Abrasion	Level 1
Indentation	Level 1
Soft Body Impact	Level 2
Hard Body Impact	Level 1

^{*} With a standard primer and two coats of finish paint, USG Fiberock AR Interior Panels will achieve level 3 abrasion resistance

LIMITATION

- 1. USG Fiberock AR Interior Panels are designed for interior use only.
- 2. Panels may be attached to wood or steel-stud framing and furring channels.
- 3. For abuse-resistant or fire-resistant construction, 20-gauge or heavier studs are required.
- 4. For improved abuse-resistant system performance, USG ME Beads and Trims or USG Sheetrock® and Beadex® Brand Paper-Faced Metal Corner Bead and Trim and USG ME Sheetrock® Brand Tuff-Hide™ Primer-Surfacer are recommended.
- 5. Where USG Fiberock AR Interior Panels systems abut or intersect dissimilar construction or building structural components, isolation techniques, such as caulk and/or slip tracks, are required.
- 6. Control joints should be spaced at a maximum of 8.5 m on center in walls and above door jambs; 8.5 m on center in ceilings 15.25 m with perimeter relief) and at L-, T- or U-intersections. Location of control joints is the responsibility of the professionalarchitect.
- 7. Framing members should be straight and true. Studs and joints must be in true alignment; bridging, firestops, etc. must not protrude beyond plane of framing. Due to strength and rigidity of USG Fiberock AR Interior Panels, it may be difficult to compensate for out-of-plane imperfections in framing.

STORAGE OF MATERIALST

All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements. All materials should be stored flat.

INSTALLATION

- Position all ends and edges of all gypsum-fiber panels over framing members, except when joints are at right angles to framing members, as in perpendicular application or when end joints are back-blocked.
- 2. Install panels vertically whenever possible. For horizontal panel application, panels must be gapped 1.6 mm of an inch. End joints should be loosely fit. Install panels a minimum of 9.5 mm above the floor. To minimize end joints, use panels of maximum practical lengths. Stagger end joints in successive courses with joints on opposite sides of a partition placed on different studs.
- 3. Attach panels to framing supports by: Standard Single Nailing Method, Double Nailing Method or Power-Driven Screws. Space fasteners not less than 9.5 mm from edges and ends of panels and drive as recommended for specified fastening method. Drive fasteners in field of panels first, working toward ends and edges. Hold panel in firm contact with framing while driving fasteners. Drive fastener heads slightly below surface of gypsum fiber panels in a uniform dimple.
- 4. Concealment of joints, fasteners and trims in areas that will be painted: For taping use USG Sheetrock® Brand Paper Joint Tape with USG Sheetrock® Brand Durabond® Joint Compound. For finishing use a USG Sheetrock® Brand All Purpose Joint Compound. In areas that will be tiled, finish joints with USG Durock™ Brand Tile Backer Tape and latex-fortified mortar or Type I mastic.
- For non-fire-rated partition designs, refer to the tables below for fastener spacing.For UL fire-rated partition designs, refer to the specific UL design for proper fastener spacing.

Ceilings (Steel-Framed) Fastener Spacing Application Frame Spacing 12.7 mm Parallel 400 mm o.c. 180 mm o.c. 400 mm o.c. 12.7mm Perpendicular 400 mm o.c. 180 mm o.c. 400 mm o.c. Parallel 400 mm o.c. 400 mm o.c. 180 mm o.c. 15 9 mm 15.9 mm Perpendicular 600 mm o.c. 180 mm o.c. 600 mm o.c.

Walls		Fastener Spacing		
Thickness	Frame Spacing*	Nails	Screws	
12.7 mm	600 mm o.c.	200 mm o.c.	300 mm o.c.	
12.7mm	400 mm o.c.	200 mm o.c.	400 mm o.c.	
15.9 mm	600 mm o.c.	200 mm o.c.	300 mm o.c.	
15.9 mm	400 mm o.c.	200 mm o.c.	400 mm o.c.	

6. Install trim at all internal and external angles formed by the intersection of either panel surfaces or other surfaces. Apply (metal) (paper-faced) corner bead to all vertical or horizontal external corners in accordance with manufacturer's directions.

Notes:

* Consult USG Middle East technical team for the framing spacing if fire rating required.

SURFACE TREATMENT

USG Fiberock interior panels must be surface treated with one of the options, in accordance with USG ME recommendations. Option A may be used when surface uniformity is not of concern, (i.e., the surface uniformity stipulation has been waived by the job managerial and/or inspection authorities and conditions described in Option B (below) do not exist.)

OPTION 1:

Apply a skim coat of joint compound at a trowel-applied consistency to entire surface and let dry using a USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound.

Note: When properly prepared as a skim coating material, these ready mixed joint compounds can be used in a skim coat operation.

The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one coat (5-10 mils Wet Film Thickness) of USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound over the entire surface. Allow surface to dry prior to decorating.

Note: A single full coverage coat of USG Sheetrock® Brand Tuff-Hide Primer-Surfacer may be used in lieu of a skim coat of joint compound and the application of USG Sheetrock® Brand First Coat Primer.

OPTION 2:

Recommended in areas where one or more of the following conditions exist:

- 1) Exposure to critical/severe lighting.
- 2) Paints with sheen levels other than flat are specified.
- 3) High value spaces exist.
- 4) Final surface smoothness and uniformity are expected and/or specified.

 Apply two separate skim coat of joint compound at a trowel-applied consists

Apply two separate skim coat of joint compound at a trowel-applied consistency to entire surface and let dry using a USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound.

Note: When properly prepared as a skim coating material, these ready mixed joint compounds can be used in a skim coat operation.

The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one coat (5-10 mils Wet Film Thickness) of USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound over the entire surface. Allow surface to dry prior to decorating.

Note: A single full coverage coat of USG Sheetrock® Brand Tuff-Hide Primer-Surfacer may be used instead of the second skim coat.

Optional Veneer Plaster

Joints should be treated with USG Sheetrock® Brand paper joint tape and USG Durabond® Setting-Type Joint Compound. Joint surfaces must be treated with a separate coat of joint compound to fully conceal the paper tape. When the joint is completely dry, treat entire wall surface with USG plaster bonder according to application directions. Then apply USG Diamond® Veneer Basecoat

Plaster from 1.6 mm to 2.4 mm thickness using a scratch and double-back technique. This is accomplished by applying a tight, thin coat over the entire area, and immediately doubling back with plaster from the same batch to achieve full thickness. When basecoat plaster is firm, broom the surface to leave it rough and open for finish. With basecoat set and partially dry, apply USG Imperial® Veneer Finish Plaster using a scratch and double-back technique. Complete finishing when material is firm. Leave finished surface smooth and dense for decorating.

Ceramic Tile Applications

Joints should be treated with USG Sheetrock® Brand paper joint tape and USG Durabond® Setting-Type Joint Compound. Joint surfaces must be treated with a separate coat of joint

SURFACE TREATMENT

- USG Fiberock AR Interior Panels are designed for interior use only and should not be used in exterior applications.
- 2. Panels should not be exposed to sustained temperatures in excess of 50 °C.
- 3. For fire-resistant or abuse-resistant construction over steel framing, a minimum of 20-gauge steel framing is required.

FIBEROCK® BRAND AQUA-TOUGH™ AR INTERIOR PANELS



Gypsum-fiber abuse-resistant panels outperform paper-faced gypsum board in abuse-prone areas

- Aqua-Tough™ panels provide increased resistance to moisture and mold
- No face paper to scratch or tear
- Resist denting, breaking and puncturing, even in high-traffic areas
- Provide excellent fire resistance
- Offer an economical alternative to concrete block and plaster construction
- Ideal for institutional, commercial and residential interiors
- Certified, recycled content of 97 percent

DESCRIPTION

USG Fiberock® Brand Aqua-Tough™ AR Interior Panels are engineered to provide increased resistance to moisture, mold, abrasion, indentation and penetration for interior walls and ceilings in demanding construction applications. These Gypsum-fiber panels are designed to outperform paper-faced gypsum board. Strong, solid and durable, they are approved for use in wet areas, including residential showers and tub surrounds. They also resist denting, breaking and puncturing—even in high-traffic areas. USG Fiberock Aqua-Tough AR Interior Panels are code approved for use in noncombustible construction. They have exceptional surface-burning characteristics (ASTM E84, Flame Spread 5, Smoke Developed 0) and fire resistance (ASTM E119). 15.9mm. USG Fiberock® Brand Aqua-Tough™ AR Interior Panels may be used in lieu of Type X gypsum panels in over 50 fire-rated wall assemblies as listed in the Underwriters Laboratories Inc. (UL) Fire Resistance Directory under "Type FRX-G."

TECHNICAL DATA

Property	Unit of Measure	ASTM Test Method	15.9mm USG Fiberock® Brand Aqua-Tough™ AR Interior Panel	12.7mm USG Fiberock* Brand Aqua-Tough™ AR Interior Panel
Flexural Strength	lbf	C473	> 155	>110
Compressive	psi	n/a	> 500	>500
Strength Nail-Pull Resistance	lb (10 mm head diameter, dry)	C473	> 145	>120
Weight	kg/m²	C473	15.1	11.7
Mold Resistance	-	D3273	10 (no growth)	10 (no growth)
Surface-Burning Characteristics	flame/smoke	E84	5/0	5/0
Thermal	"R"/k value	C518	-	30/1.84

Compliance with Standards: Meets ASTM C1278. Edge Configuration: Long edges tapered; ends cut square

ABUSE-RESISTANT PERFORMANCE

ASTM C1629 Performance	Units (pcs.)
*Abrasion	Level 1
Indentation	Level 1
Soft Body Impact	Level 2
Hard Body Impact	Level 1

^{*} With a standard primer and two coats of finish paint, USG Fiberock® Brand Aqua-Tough™ AR Interior Panels will achieve level 3 abrasion resistance.

ADVANTAGES

Abuse Resistant: Engineered to provide increased resistance to abrasion, indentation and penetration, this panel outperforms paper-faced or glass mat-faced panels, with no paper face to tear or scratch.

Water Resistant: Water resistant through the core and suitable for use in wet areas including residential showers and tub surrounds.

Mold Resistant: In independent lab tests per ASTM D3273 Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber, USG Fiberock Aqua-Tough AR

Interior Panels earn the highest score: 10.

Fire Resistant: Superior fi re resistance and exceptional surface-burning characteristics. The 15.9mm panel is UL Classified for fire resistance (FRXG) and listed in more than 50 UL wall designs.

Finishing Flexibility: Features a smooth, paintable surface that can also be finished with ceramic tile.

Environmentally Friendly: Made from 97% recycled materials.

LIMITATION

- 1. USG Fiberock® Brand Aqua-Tough™ AR Interior Panel are designed for interior use only.
- 2. Panels may be attached to wood or steel-stud framing and furring channels.
- 3. For abuse-resistant or fire-resistant construction, 20-gauge or heavier studs are required.
- 4. For improved abuse-resistant system performance, USG ME Metal Beads and Trims or USG Sheetrock® and Beadex® Brand Paper- Faced Metal Corner Bead and Trim and USG Sheetrock® Brand Tuff-Hide™ Primer-Surfacer are recommended.
- 5. Where USG Fiberock® Brand interior panel systems abut or intersect dissimilar construction or building structural components, isolation techniques, such as caulk and/or slip tracks, are required.
- 6. USG Control joints should be spaced at a maximum of 8.5 m o.c. in walls and above door jambs; 8.5 m o.c. in ceilings (15m with perimeter relief) and at L-, T- or U-intersections. Location of control joints is the responsibility of the professional/architect.
- 7. Framing members should be straight and true. Studs and joints must be in true alignment; bridging, firestops, etc. must not protrude beyond plane of framing. Due to strength and rigidity of USG Fiberock interior panels, it may be difficult to compensate for out-of-plane imperfections in framing.

STORAGE OF MATERIALS

All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements. All materials should be stored flat

INSTALLATION

- Position all ends and edges of all gypsum-fiber panels over framing members, except when joints are at right angles to framing members, as in perpendicular application or when end joints are back-blocked.
- 2. Install panels vertically whenever possible. For horizontal panel application, panels must be gapped 1.6 mm End joints should be loosely fit. Install panels a minimum of 10 mm. above the floor. To minimize end joints, use panels of maximum practical lengths. Stagger end joints in successive courses with joints on opposite sides of a partition placed on different studs.
- 3. Attach panels to framing supports by: standard single nailing method, double nailing method, or power-driven screws. Space fasteners not less than 10 mm. from edges and ends of panels and drive as recommended for specified fastening method. Drive fasteners in field of panels first, working toward ends and edges. Hold panel in firm contact with framing while driving fasteners. Drive fastener heads slightly below surface of gypsum-fiber panels in a uniform dimple.
- 4. Concealment of joints, fasteners and trims in areas that will be painted: For taping use USG Sheetrock® Brand Paper Joint Tape with USG Sheetrock® Brand Durabond® Joint Compound. For finishing use a USG Sheetrock® Brand All Purpose Joint Compound. In areas that will be tiled, finish joints with USG Durock™ Brand Tile Backer Tape and latex-fortified mortar or Type I mastic.
- For non-fire-rated partition designs, refer to the table below for fastener spacing.For UL fire-rated partition designs, refer to the specific UL design for proper fastener spacing.

Ceilings (Steel-Framed)			Fastener Spacing	Fastener Spacing		
Thickness	Application	Frame Spacing	Nails	Screws		
12.7 mm	Parallel	400 mm o.c.	Level 1	400 mm o.c.		
12.7mm	Perpendicular	400 mm o.c.	Level 1	400 mm o.c.		
15.9 mm	Parallel	400 mm o.c.	Level 2	400 mm o.c.		
15.9 mm	Perpendicular	600 mm o.c.	Level 1	600 mm o.c.		

Walls		Fastener Spacing		
Thickness	Frame Spacing*	Nails	Screws	
12.7 mm	600 mm o.c.	200 mm o.c.	300 mm o.c.	
12.7mm	400 mm o.c.	200 mm o.c.	400 mm o.c.	
15.9 mm	600 mm o.c.	200 mm o.c.	300 mm o.c.	
15.9 mm	400 mm o.c.	200 mm o.c.	400 mm o.c.	

6. Install trim at all internal and external angles formed by the intersection of either panel surfaces or other surfaces. Apply (metal) (paper-faced) corner bead to all vertical or horizontal external corners in accordance with manufacturer's directions.

SURFACE TREATMENT

USG Fiberock interior panels must be surface treated with one of the options, in accordance with USG ME recommendations. Option A may be used when surface uniformity is not of concern, (i.e., the surface uniformity stipulation has been waived by the job managerial and/or inspection authorities and conditions described in Option B (below) do not exist.)

OPTION 1:

Apply a skim coat of joint compound at a trowel-applied consistency to entire surface and let dry using a USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound.

Note: When properly prepared as a skim coating material, these ready mixed joint compounds can be used in a skim coat operation.

The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one coat (5-10 mils Wet Film Thickness) of USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound over the entire surface. Allow surface to dry prior to decorating.

Note: A single full coverage coat of USG Sheetrock* Brand Tuff-Hide Primer-Surfacer may be used in lieu of a skim coat of joint compound and the application of USG Sheetrock* Brand First Coat Primer.

OPTION 2:

Recommended in areas where one or more of the following conditions exist:

- 1) Exposure to critical/severe lighting.
- 2) Paints with sheen levels other than flat are specified.
- 3) High value spaces exist.
- 4) Final surface smoothness and uniformity are expected and/or specified.

 Apply two separate skim coat of joint compound at a trowel-applied consistency to entire surface and let dry using a USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound.

Note: When properly prepared as a skim coating material, these ready mixed joint compounds can be used in a skim coat operation.

The skim coated surface must be smooth and free of tool marks and ridges (a light sanding of the skim coating may be necessary to remove tool marks). Remove sanding dust from surface, then apply one coat (5-10 mils Wet Film Thickness) of USG Middle East Sheetrock® Brand ready-mix all purpose type joint compound over the entire surface. Allow surface to dry prior to decorating.

Note: A single full coverage coat of USG Sheetrock® Brand Tuff-Hide Primer-Surfacer may be used instead of the second skim coat.

Veneer Plaster

Joints should be treated with USG Sheetrock® Brand Paper Joint Tape and USG Durabond® Joint Compound. Joint surfaces must be treated with a separate coat of joint compound to fully conceal the paper tape. When the joint is completely dry, treat entire wall surface with USG plaster bonder according to application directions. Then apply USG Diamond® Veneer Basecoat Plaster from 1.6 mm to 2.4 mm. thickness using a scratch and double-back technique. This is accomplished

by applying a light, thin coat over the entire area, and immediately doubling back with plaster from the same batch to achieve full thickness. When basecoat plaster is firm, broom the surface to leave it rough and open for finish. With basecoat set and partially dry, apply USG Imperial® Veneer Finish Plaster using a scratch and double-back technique. Complete finishing when material is firm. Leave finished surface smooth and dense for decorating.

Ceramic Tile Applications

USG Fiberock® Brand Aqua-Tough™ AR Interior Panels are acceptable for use as a ceramic tile backer.

SURFACE TREATMENT

- USG Fiberock® Brand Aqua-Tough™ AR Interior Panels are designed for interior use only and should not be used in exterior applications.
- 2. Panels should not be exposed to sustained temperatures in excess of 50 $^{\circ}$ C.
- 3. For fire-resistant or abuse-resistant construction over steel framing, a minimum of 20-gauge steel framing is required.

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FIBEROCK® BRAND TILE BACKERBOARD AND UNDERLAYMENT



FEATURES & BENEFITS

Environmentally sustainable, water-resistant panel for interior tile backer and underlayment needs

- Made from 97% recycled material
- Uniform composition provides both strength and water resistance
- Use in both wet and dry areas throughout the home
- Ideal under tile, stone, vinyl, hardwood flooring, laminate flooring, carpeting and countertops
- Superior tile bond—three times industry standard
- Recognized by major resilient-flooring and adhesive manufacturers
- Free of resins, adhesives and solvents that might stain a vinyl floor
- Provides a smooth, flat, paintable surface for wall applications
- Easy to cut, fasten and install

DESCRIPTION

USG Fiberock® Brand Tile Backerboard and Underlayment panels are manufactured from an environmentally sustainable, specially engineered combination of synthetic gypsum and cellulose fibers. USG Fiberock® Tile Backerboard and Underlayment panels have an integral water-resistant composition that offers durability, superior performance and exceptional tile bond. USG Fiberock® Tile Backerboard and Underlayment panels are engineered to meet water-, mold- and indentation resistance needs under and/ or behind tile, resilient flooring, carpeting, hardwood flooring and laminate flooring in new construction and/or remodeling. USG Fiberock® Tile Backerboard is also an ideal substrate for painted wall surfaces, when transitioning from tile to paint. USG Fiberock® Underlayment provides a smooth, flat surface that resists swelling and warping often seen with wood-based underlayment, and contains none of the resins, adhesives or solvents that can stain floor covering materials. It also offers greater resistance to indentation than other underlayment products and can be used throughout a home—in both wet and dry areas— regardless of the flooring material chosen.

PRODUCT DATA

Size (thickness x width x length)	Units (pcs)	
6.5 mm x 1220 mm x 1220 mm	60	
6.5 mm x 915 mm x 1525 mm	60	
9.5 mm x 1220 mm x 1220 mm	60	
9.5 mm x 1220 mm x 2440 mm	40	
9.5 mm x 915 mm x 1525 mm	60	
12.7 mm x 915 mm x 1525 mm	50	
12.7 mm x 1220 mm x 2440 mm	30	
15.9 mm x 915 mm x 1525 mm	40	
15.9 mm x 1220 mm x 2440 mm	24	

COMPLIANCE

USG Fiberock® Tile Backerboard and Underlayment panels meet ASTM standard C1278. Residential and light-commercial performance rating based on Robinson Floor Test (ASTM C627), conducted by The Tile Council of North America (TCNA).

COMPOSITION AND MATERIALS

USG Fiberock® Tile Backerboard and Underlayment panels are made from 97 percent recycled material.

STORAGE OF MATERIALS

All materials should be delivered and stored in their original unopened package and stored in an enclosed shelter providing protection from damage and exposure to the elements. Store all USG Fiberock Tile Backerboard and Underlayment panels flat.

ENVIRONMENTAL CONDITIONS

In cold weather and during USG Fiberock Tile Backerboard and Underlayment panel and tile installation, temperatures within the building shall be maintained

APPLICATIONS

Steel framing shall approximate the moisture content it will reach in service by allowing the enclosed building to stand as long as possible prior to the application of the USG Fiberock Tile Backerboard and Underlayment panels.

INSTALLATION

Panel Layout:

- For flooring applications, lay cut edges against the wall; only factory edges should be joined. Begin laying panels at one corner. Maintain 6.5 mm. space between panels and perimeter walls. Stagger joints a minimum of 400 mm. so that four panel corners never meet, and offset end and edge joints of panels a minimum of 300 mm to 400 mm. from subfloor panel joints. Adjoin panel edges and ends lightly together. A maximum 0.8 mm. gap is allowed.
- 2. For wall applications, install panels with ends and edges closely abutted, but not forced together. Stagger end joints in successive order.

Tile And Stone Applications:

- 1. For flooring applications over a wood-based substrate, laminate USG Fiberock Underlayment to subfloor using Type 1 organic adhesive or latex-modified thin-set mortar or dry-set mortar. Fasten to subfloor with 25.4-6.5 mm. USG Durock™ Brand Tile Backer Screws for steel framing (or equivalent) or 25.4-12.7 mm. hot-dipped galvanized roofing nails spaced 200 mm o.c. in both directions with perimeter fasteners at least 9.5 mm. and less than 15.9 mm. from ends and edges. Drive nails and screws so that bottoms of heads are flush with panel surface to ensure firm panel contact with subfloor. Do not overdrive fasteners.
- 2. For wall application, fasten USG Fiberock Tile Backerboard panels to framing with specified fasteners. Drive fasteners into field of panels first, working toward ends and edges. Hold panels in firm contact with framing while driving fasteners. Space fasteners a maximum 200 mm o.c. for walls, 150 mm o.c. for ceilings, with perimeter fasteners at least 9.5 mm and less than 15.9 mm from ends and edges. Drive nails and screws so that bottoms of heads are flush with panel surface to ensure firm panel contact with framing. Do not overdrive fasteners past panel surface. For steel stud applications (20 ga. or equivalent) use 25.4-6.5 mm or 25.4-15.9 mm. USG Durock™ Tile Backer Screws for steel framing (or equivalent). For steel stud applications, use 25.4-6.5 mm , 25.4-15.9 mm or 50.8-6.5 mm. USG Durock™ Tile Backer Screws for steel framing (or equivalent) or 25.4-12.7 mm hotdipped galvanized roofing nails.
- 3. For countertop applications, install minimum 19 mm exterior grade plywood or OSB base across cabinet supports. Cover plywood base with USG Durock™ Brand Tile Membrane, 6.75 kg felt or 4 mil polyethylene and attach with 6.5 mm. galvanized staple. Fit ends and edges of USG Fiberock underlayment closely but not forced together. Stagger panel joints from plywood base joints. Space fasteners 203 mm o.c. around the perimeter and in the field of the board.
- 4. Finishing panel joints: In areas that will be tiled, fill joints with latex-fortified mortar or Type 1 organic adhesive and immediately embed alkali-resistant, fiberglass mesh joint tape. In wall applications that will be painted: For taping use USG Sheetrock® Brand Paper Joint Tape with USG Sheetrock® Brand Durabond® Joint Compound. For finishing use USG Middle East Sheetrock® Brand All Purpose Joint Compound. Do not use USG Sheetrock® Brand Plus 3®, Midweight™ or UltraLightweight All Purpose Joint Compounds on USG Fiberock Tile Backerboard and Underlayment panels.
- 5. Cut USG Fiberock Tile Backerboard and Underlayment panels to size with a utility knife and straight edge. Use power saw only if it is equipped with a dust collection device and a NIOSH/ MSHA-approved respirator is worn. When using the score-and-snap method, score the panel twice and snap the panel away from the cut face. If a power-operated saw is used, a low-RPM portable saw with a 76-12.7 mm carbide-tipped blade is recommended. When necessary to obtain neatly fitting joints, use a rasp or surform to smooth cut edges. Holes for pipes, fixtures and other small openings can be cut out with a saw or a drywall router equipped with a special bit.

RESILIENT FLOORING APPLICATIONS

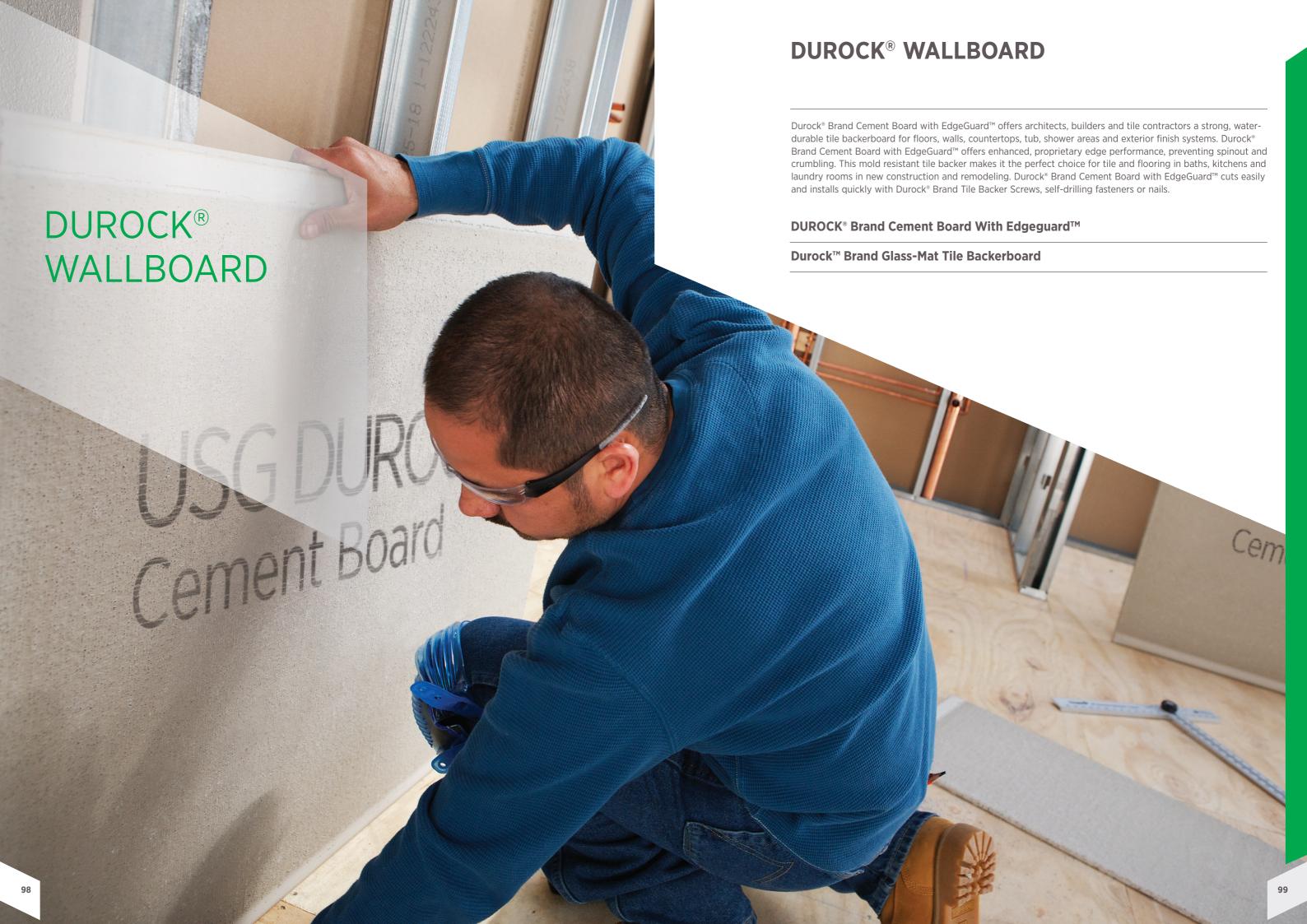
- 1. Fasten USG Fiberock Underlayment to subfloor with minimum 6.5 mm crown chisel point staples, hot-dipped galvanized ring shank nails or corrosion-resistant screws. Fastener length should be approximately equal to combined thickness of underlayment and subfloor. Fasteners should not penetrate through subfloor; long fasteners that penetrate the floor joists may compromise the ability of the subfloor to expand and contract uniformly with natural variations in temperature and humidity. Critical lighting situations should be considered when determining panel layout.
- 2. Begin fastening where three panels intersect. Affix fasteners along joints in a zipper pattern at 25.4 mm o.c., 6.5 mm from panel edge. Install fasteners at 100 mm o.c. in the field of panels. When using pneumatic tools, apply sufficient pressure on gun to prevent the tool from bouncing. Set pneumatic tool pressure to drive fasteners flush or slightly below underlayment surface. To prevent fastener heads from telegraphing through resilient floor covering, do not countersink more than 1.6 mm below surface. Fasten one panel at a time. Begin at one end and fan out across the panel.
- 3. Installing Panels Over Existing Vinyl Floor Covering—Do not install underlayment over cushion backed vinyl. Ensure that existing floor is level, fully adhered and well bonded and meets appropriate design requirements. Repair missing or broken tiles, curling seams, severe gouges, protrusions of surface and any other damage with a high- quality floor leveler. Follow floorcovering manufacturer's recommendations for installations over existing floors.
- 4. Finishing Panel Joints—Use patching compound sparingly to fill wide joints, repair any surface voids and correct joint lippage (panel edge sitting above or below the floor plane). Carefully fill joints wider than 0.8 mm and any surface imperfections with only enough material to infill void—do not feather. Correct joint lippage by applying patching compound to low side only and feathering to level. Allow compound to dry completely (90 min. minimum), then lightly sand or scrape, taking care not to scuff panel surface; use a flat blade to scrape away any excess material. Remove dust, dirt and debris from underlayment surface before application of floor covering.
- 5. Applying Floor Covering—Refer to floor-covering manufacturer's recommendations for proper procedures. For proper trowel selection, refer to adhesive manufacturer's recommendation for nonporous substrates. Follow floor-covering and/or adhesive manufacturer's guidelines for setting times before allowing traffic on the finished floor. Follow floor-covering manufacturer's recommendations for preventive maintenance, cautions and procedures.

- LIMITATIONS 1. For interior use only. USG Fiberock Tile Backerboard and Underlayment should not be used in exterior applications.
 - 2. Do not use in areas subject to prolonged exposure to standing water; for instance, gang showers, saunas and hottub decks. If waterproofing is desired, use USG Durock™ Brand Waterproofing Membrane. See USG Durock™ Brand Waterproofing Membrane submittal (CB595) for product information. For fluid-applied waterproofing, use USG Durock™ Brand Liquid Waterproofing and Crack Isolation Membrane. See USG Durock™ Brand Liquid Waterproofing and Crack Isolation Membrane submittal (CB817) for product information.
 - 3. Wall applications: Maximum stud spacing: 400 mm o.c. Framing shall be designed (based on stud properties alone) not to exceed L/360 deflection for tile, L/240 for surfaces that will be painted. Maximum fastener spacing: 200 mm o.c. for steel and steel framing: 150 mm o.c. for ceiling applications.
 - 4. Maximum dead load for ceiling system is 7.5 psf.
 - 5. Do not use 6.5 mm or 9.5 mm USG Fiberock panels for wall or ceiling applications.
 - 6. Steel framing must be 20-gauge equivalent or heavier.
 - 7. Do not use drywall screws or drywall nails.
 - 8. Do not use drywall joint tape where tile or stone will be installed.
 - 9. Floor tile applications: Maximum joist spacing 600 mm o.c. The subfloor system should be designed with a minimum deflection limit of L/360 for the span. Some finish materials may require a more rigid subassembly (such as large format tile and natural stone products). In these cases, follow the manufacturer's minimum requirements. The subfloor should be APA Span-Rated Plywood or OSB with an Exposure 1 classification or better with tongue and groove or back blocked at the unsupported edges.
 - 10. Do not install over poured in place or slab on grade installations. Installation over USG Structural Panels is permitted.
 - 11. USG Fiberock Tile Backerboard and Underlayment panels are not designed for use as a structural panel.

- 12. USG Fiberock Tile Backerboard and Underlayment panels must be finished—tiled or painted— not used as a finished surface.
- 13. USG Fiberock Tile Backerboard and Underlayment panels should not be exposed to sustained temperatures above 50 °C.

PRODUCT DATA

Description	Unit of Measure	ASTM Measures	15.9 mm USG Fiberock* Brand Tile Backerboard	12.7 mm USG Fiberock* Brand Tile Backerboard	9.5 mm USG Fiberock* Brand Underlayment	6.5 mm USG Fiberock* Brand Underlayment
Flexural Strength	lbf	C473	> 155	> 110	> 70	> 40
Compressive Strength	psi	n/a	> 500	> 500	> 500	> 500
Shear Bond Strength	psi	n/a	> 50	> 50	> 50	> 50
Water Absorption	% by wt. 24 hrs.	C473	> 5	> 5	> 10	> 10
Surface Water Absorption	Grams	C473	1.6	1.6	1.6	1.6
Nail-Pull Resistance	lb. (10 mm head diameter, wet or dry)	C473	> 120	> 120	> 90	> 70
Weight	kg/m²	C473	15.1	11.7	9.3	6.8
Mold Resistance	-	D3273	10 (no growth)	10 (no growth)	10 (no growth)	10 (no growth)
Surface Burning Characteristics	flame/smoke	E84	5/0	5/0	n/a	n/a
Thermal	"R"/k value	C518	-	0.39/1.27	-	-
Standard Method	Passes cycles 1-6	C627	Light	Light	Light	Light
for Evaluating Ceramic Floor Tile Installation Systems			Commercial	Commercial	Commercial	Commercial



DUROCK® BRAND CEMENT BOARD WITH EDGEGUARD™



FEATURES & BENEFITS

Backerboard for tile and exterior finish systems

- Enhanced proprietary edge performance prevents spinout and crumbling
- Easy to cut and fasten
- Water durable and mold resistant
- Warranted for interior and exterior applications
- Exceptional tile bond
- Noncombustible

DESCRIPTION

USG Durock® Brand Cement Board with EdgeGuard™ offers architects, builders and tile contractors a strong, water-durable tile base for tub and shower areas. Also an ideal underlayment for tile on floors and countertops in new construction and remodeling. Board is readily applied over steel framing spaced 400 mm o.c. with corrosion-resistant steel screws or hot-dipped galvanized roofing nails. After joints are treated, wall or floor tile is applied using latex fortified mortar or Type I organic adhesive.

USG Durock® Brand Cement Board with EdgeGuard is preferred by many applicators as a base for directly applied finishes, tile, stone and thin brick used in building exteriors. The 12.7 mm and 15.9 mm panels are Underwriters Laboratories Inc. (UL) Classified for fire resistance, and may be used in any UL Design where Type DCB panels are listed.

PRODUCT DATA

Size (thickness x width x length) ¹	Units (pcs)
6.4 mm x 915 mm x 1525 mm	60
12.7 mm x 813 mm x 1525 mm	50
12.7 mm x 915 mm x 1525 mm	50
12.7 mm x 1220 mm x 2440 mm	40
15.9 mm x 915 mm x 1525 mm	40
15.9 mm x 1220 mm x 2440 mm	32

Notes::

1. Other sizes available by special order.

STANDARDS

USG Durock® Brand Cement Board with EdgeGuard exceeds ANSI standards for cementitious backer units (CBU). See ANSI A118.9 for test methods and specifications for CBU and ANSI A108.11 for interior installation of CBU. Exceeds industry standards as an exterior substrate for exterior finishes. Exceeds ASTM C1325 standards for no asbestos fiber mat reinforced cementitious backer units

COMPOSITION AND MATERIALS

USG Durock® Brand Cement Board with EdgeGuard is formed in a continuous process of aggregated Portland cement slurry with polymer coated, glass-fiber mesh completely encompassing edges, back and front surfaces. The edges are formed smooth with a patented poly- propylene fabric-wrapped edge. The ends are square cut.

STORAGE OF MATERIALS

All materials should be delivered and stored in their original unopened package and stored in an enclosed shelter providing protection from damage and exposure to the elements. Even though the stability and durability of USG Durock® Brand Cement Board with EdgeGuard is unaffected by the elements, moisture and temperature variations may have an effect on the bonding effectiveness of basecoats and adhesives. Store all USG Durock® Brand Cement Board with EdgeGuard panels flat.

ENVIRONMENTAL CONDITIONS

In cold weather and during USG Durock® Brand Cement Board with EdgeGuard panel and tile installation, temperatures within the building shall be maintained within the range of 5 to 38°C. Adequate ventilation shall be provided to carry off excess moisture.

INTERIOR APPLICATIONS

The building shall be enclosed and the HVAC system operating so that steel framing shall reach the moisture content it will reach in service. Do not install board when the board is wet.

EXTERIOR APPLICATIONS

In exterior applications, USG Durock® Brand Cement Board with EdgeGuard should not be left uncovered for a period of time exceeding 90 days. Discoloration or staining may occur due to exposure to the elements which will not affect performance of the panel. Finishes, leveling/skim coats and basecoats should not be applied to USG Durock® Brand Cement Board with EdgeGuard panel that is wet or frozen or that contains frost. After application, and for at least 24 hours, finishes, leveling/skim coats and basecoats should be effectively protected from rain and excessive moisture. In cold weather and during finish applications, USG Durock® Brand Cement Board with EdgeGuard panel, skim or basecoat, mortar, finish material and air temperature must be at least 5°C and must remain at this temperature or higher for at least 24 hours after application. Hot and dry weather may affect working time of leveling/skim or basecoat and finish materials. Under rapid drying conditions, dampening or light fogging of board, leveling/skim or basecoat surface may be required to improve workability.

PANEL MICROCRACKING

USG Durock® Brand Cement Board with EdgeGuard is formulated to develop fine microcracking (also called multiple cracking) in the panel. The microcracking process helps to evenly relieve the stored strain energy in the product due to handling and installation, external loads and/or panel restrained movement. The presence of microcracks in the panel should not be considered a product defect.

INSTALLATION

- 1. Install cement board with ends and edges closely abutted, but not forced together. Stagger end joints in successive courses.
- 2. For flooring applications over a wood-based substrate, laminate USG Durock® Brand Cement Board with EdgeGuard to subfloor using Type 1 organic adhesive or latex-modified thin-set mortar suitable for bonding cement board. Fasten to subfloor with 32 mm USG Durock™ Brand Tile Backer Screws for steel framing (or equivalent) or 38 mm hotdipped galvanized roofing nails spaced 200 mm o.c. in both directions with perimeter fasteners at least 10 mm and less than 16 mm from ends and edges. Drive nails and screws so that bottoms of heads are flush with panel surface to ensure firm panel contact with subfloor. Do not overdrive fasteners. Prefill joints with tile- setting mortar or adhesive and then immediately embed USG Durock™ Brand Tile Backer Tape and level joints.
- 3. For wall application, fasten USG Durock® Brand Cement Board with EdgeGuard panels to framing with specified fasteners. Drive fasteners into field of panels first, working toward ends and edges. Hold panels in firm contact with framing while driving fasteners. Space fasteners maximum 200 mm o.c. for walls, 150 mm o.c. for ceilings, with perimeter fasteners at least 10 mm and less than 16mm from ends and edges. Drive nails and screws so bottoms of heads are flush with panel surface to ensure firm panel contact with framing. Do not overdrive fasteners. Approved fasteners include: USG Durock™ Brand Tile Backer Screws for steel framing (or equivalent),32 mm and 41 mm for 14- to 20-gauge steel framing; USG Durock™ Brand Tile Backer Screws for steel framing (or equivalent), 32 mm, 41 mm and 57 mm for steel framing. Nails 38 mm hot-dipped galvanized roofing nails). Prefill joints with tile-setting mortar or adhesive and then immediately embed USG Durock™ Brand Tile Backer Tape and level inints
- 4. Cement board should be cut to size with a knife and straight edge. A power saw should be used only if it is equipped with a dust-collection device. Installer should wear NIOSH/MSHA approved dust mask.
- 5. If waterproofing is desired, use USG Durock™ Brand Waterproofing Membrane or USG Durock™ Brand Liquid Waterproofing Membrane.

LIMITATIONS

- 1. Designed for positive or negative uniform loads up to 60 psf.
- 2. Wall applications: Maximum stud spacing: 400 mm o.c 600 mm o.c. for cavity shaft wall assembly. Framing shall be designed (based on stud properties alone) not to exceed L/360 deflection for tile and thin brick, L/240 for direct-applied exterior finish systems. Maximum fastener spacing: 200 mm o.c. for steel framing; 150 mm o.c. for ceiling applications.
- 3. Floor applications: Maximum joist spacing 600 mm o.c. The subfloor system should be designed with a minimum deflection limit of L/360 for the span. Some finish materials may require a more rigid subassembly (such as large format tile and natural stone products). In these cases, follow the manufacturer's minimum requirements. The subfloor should be APA Span-Rated Plywood or OSB with an Exposure 1 classification or better with tongue and groove or back blocked at the unsupported edges.
- 4. In exterior applications, USG Durock® Brand Cement Board with EdgeGuard should not be left uncovered for a period of time exceeding 90 days. Discoloration or staining may occur due to exposure to the elements which will not affect performance of the panel.
- 5. Brittle coatings, such as epoxy coatings, are not recommended for use with USG Durock® Brand Cement Board with EdgeGuard. USG Durock® Brand Cement Board with EdgeGuard is intended for use with tile, thin brick and exterior stucco coatings only.
- 6. Maximum dead load for ceiling system is 7.5 psf.
- 7. Steel framing must be 20-gauge or heavier.
- 8. Do not use drywall screws or drywall nails. Do not use drywall joint tape.
- 9. Do not use 6.4 mm USG Durock® Brand Cement Board with EdgeGuard for wall or ceiling applications. 6.4 mm USG Durock® Cement Board with EdgeGuard is for use in interior applications only.
- 10. Do not use USG Durock® Brand Cement Board with EdgeGuard with vinyl flooring.
- 11. USG Durock® Brand Cement Board with EdgeGuard is not designed for use as a structural panel
- 12. Maximum installed weight of the finish system should not exceed 15 psf.
- 13.USG Durock® Brand Cement Board with EdgeGuard panels should not be used in areas where they are exposed to temperatures that exceed 93°C.
- 14.In locations close to salt water or other challenging environments, design professionals should consider the use of stainless steel fasteners.
- 15.Do not use lightweight setting-type joint compounds or ready-mix joint compounds directly over USG Durock® Brand Cement Board with EdgeGuard.

TECHNICAL DATA

Description	Unit of Measure	ASTM Test Method	15.9mm USG Durock* Brand Cement Board with EdgeGuard™	12.7mm USG Durock* Brand Cement Board with EdgeGuard™	6.4mm USG Durock® Brand Cement Board with EdgeGuard™ Underlayment
Flexural strength	psi (MPa)	C947	>480	>750	>1000(6.9)
Indentation strength	psi (MPa)	D23394	>1250	>1250	>1250 (8.9
Shear bond strength	psi	ANSI A118.4	>50	>50	>50
Nail-pull resistance	lb. 10 mm head dia mtr, wet or dry	C473	>90	>90	-
Weight	kg/m ²	C473	14.6	11.7	9.3
Freeze/thaw resistance	procedure B, number of cycles with no deterioration	C666	100	100	100
Mold resistance	-	G21 D3273	Rating 0, No growth 10/10	Rating 0, No growth 10/10	Rating 0, No growth 10/10
Noncombustibility	Pass/Fail	E136	Pass	Pass	Pass
Surface-burning characteristics	flame/smoke	E84	0/0	0/0	0/0
Thermal	"R"/k value	C518	0.49/1.27	0.39/1.27	-
Standard method for evaluating ceramic floor tile installation systems	Passes cycles 1-6	C627	Light commercial	Light commercial	Light commercial
Minimum bending radius	mm (requires special framing details available	-	1800	1800	-

UNIFORM LOAD

12.7mm USG DUROCK® BRAND CEMENT BOARD WITH EDGEGUARD™

Stud Spacing	Fastener Spacing	Design Wind Load (I/240)	Design Wind Load (I/360)
300 mm o.c.	200mm	45 psf	45 psf
	150 mm	60 psf	60 psf
400 mm o.c.	200mm	33 psf	30 psf
	150 mm	45 psf	30 psf
600 mm o.c (for shaftwall	200mm	13 psf	9 psf
assemblies only)	150 mm	12 psf	9 psf

DUROCK™ BRAND GLASS-MAT TILE BACKERBOARD



DESCRIPTION

FEATURES & BENEFITS

- Lightweight and easy to score, snap and fasten
- Moisture- and mold-resistant substrate
- Scores the highest achievable rating (10 out of 10) for mold resistance according to ASTM D3273
- Proprietary coating provides exceptional tile bond performance

USG Durock™ Brand Glass-Mat Tile Backerboard is a water and mold resistant coated glassmat tile backerboard. The face of the panel is treated with a proprietary coating for moisture resistance and enhanced tile bond, making it ideal as a tile substrate for dry and/or wet areas.

The 15.9 mm panels are Underwriters Laboratories Inc. (UL) Classified for fire resistance, and can be used in any UL Design where Type SGX panels are listed.

PRODUCT DATA

Size (thickness x width x length)	Units (pcs)
12.7 mm x 1220 mm x 2440 mm	50
12.7 mm x 1220 mm x 1524 mm	50
15.9 mm x 1220 mm x 2440 mm	40

COMPLIANCE

USG Durock™ Glass-Mat Tile Backerboard exceeds ASTM C1178, which is the standard specification for coated glass-mat water-resistant gypsum backing panels

COMPOSITION AND MATERIALS

USG Durock™ Glass-Mat Tile Backerboard consists of a treated water- resistant gypsum core that is covered with a coated fiberglass mat facer and back and has a proprietary coating surface. The panels are square edge.

STORAGE OF MATERIALS

All materials should be delivered and stored in their original packaging and stored in an enclosed shelter providing protection from damage and exposure to the elements. Store all panels flat.

ENVIRONMENTAL CONDITIONS

In cold weather and during USG Durock[™] Glass-Mat Tile Backerboard and tile installation, temperatures within the building shall be maintained within the range of 4-38 °C. Adequate ventilation shall be provided to carry off excess moisture. Low temperatures and high relative humidity will increase the curing time needed.

INTERIOR APPLICATIONS

Steel framing shall approximate the moisture content it will reach in service by allowing the enclosed building to stand as long as possible prior to the application of the backerboard. Panels are not intended for constant exposure to water. Protect from immersion in water and the eroding effects of cascading water.

LIMITATIONS

1. Tile must be applied on the gray-coated side of panel. Panels are designed for interior use only and should not be used around fireplaces or areas where prolonged exposure to heat exceeds 52°C or for exterior applications. Use framing or furring when applying over concrete or masonry block. Install vapor retarders suitable for bonding tiles on the face of the panels.

- 2. For wall applications, maximum stud spacing is 400mm o.c., or 610mm o.c. with back-blocking at horizontal joints. Framing shall be designed (based on stud properties alone) not to exceed L/360 deflection for tile and thin brick. Maximum fastener spacing: 203 mm o.c. for wood and steel framing; 153 mm o.c. for ceiling applications.
- 3. For floor applications, maximum joist spacing 610 mm o.c. The subfloor system should be designed with a maximum deflection limit of L/360 for the span. Some finish materials may require a more rigid subassembly (such as large format tile and natural stone products). In these cases, follow the manufacturer's minimum requirements. The subfloor shall be APA Span-Rated Plywood or OSB with an Exposure 1 classification or better with tongue and groove or back blocked at the unsupported edges.
- 4. Do not use where temperature will be above 50°C.
- 5. Maximum dead load for ceiling system is 7.5 psf.

rooms, gang showers, or shower pan bases.

- 6. Steel framing must be 20-gauge equivalent or heavier.
- 7. Do not use drywall screws or drywall nails. Do not use drywall joint tape.
- 8. Do not use with vinyl flooring or over a concrete subfloor.
- 9. USG Durock™ Glass-Mat Tile Backerboard is not designed for use as a structural panel. 10.Panels should not be used in select wet areas including commercial saunas or steam
- 11. Waterproofing membrane must be used over USG Durock[™] Glass- Mat Tile Backerboard in select wet areas including indoor hot tub decks, shower benches and niches, tiled wall and ceiling applications in indoor pool areas, and tiled wall and ceiling applications in residential steam rooms, per ANSI A118.10.

INSTALLATION

- 1. Install backerboard with ends and edges closely abutted but not forced together. Stagger end joints in successive courses.
- 2. For flooring applications over a wood-based substrate, laminate USG Durock™ Glass-Mat Tile Backerboard to subfloor using Type 1 organic adhesive or latex-modified thin-set mortar suitable for bonding cement board. Fasten to subfloor with 32 mm USG Durock™ BrandTile Backer Screws for wood framing (or equivalent) or 38 m hot-dipped galvanized roofing nails spaced 203 mm o.c. in both directions with perimeter fasteners at least 10 mm and less than 15.9 mm from ends and edges. Drive nails and screws so bottoms of heads are flush with panel surface to ensure firm panel contact with subfloor. Do not overdrive fasteners. Prefill joints with tile- setting mortar or adhesive and then immediately embed USG Durock™ Brand Tile Backer Tape and level joints.
- 3. For wall application, fasten USG Durock[™] Glass-Mat Tile Backerboard to framing with specified fasteners. Drive fasteners into field of panels first, working toward ends and edges. Hold panels in firm contact with framing while driving fasteners. Space fasteners maximum 203 mm o.c. for walls, 153 mm o.c. for ceilings, with perimeter fasteners at least 10 mm and less than 15.9 mm from ends and edges. Drive nails and screws so bottoms of heads are flush with panel surface. Do not overdrive fasteners. Approved fasteners include: USG Durock[™] Tile Backer Screws for steel framing (or equivalent), 32 mm and 41 mm for 14- to 20-gauge steel framing; USG Durock[™] Tile Backer Screws for wood framing (or equivalent), 32 mm, 41 mm and 57 mm for wood framing; and nails 38 mm hot-dipped galvanized roofing nails). Prefill joints and then immediately embed USG Durock[™] Tile Backer Tape and level joints. Maintain 6.5 mm gap between USG Durock[™] Glass-Mat Tile Backerboard and tub surround. USG Durock[™] Brand Glass-Mat Tile Backerboard panels may be fastened to framing horizontally or vertically with stud spacing at a maximum of 610 mm on center with blocking at horizontal joints or 400 mm on center without blocking.
- 4. Panels should be cut to size with a knife and straight edge. A power saw should be used only if it is equipped with a hepa vacuum dust-collection device. Installer should wear NIOSH/ MSHA-approved dust mask.
- 5. If additional waterproofing is required, treat joints and fastener penetrations with ANSI A118.10 waterproofing membrane.
- In areas where standing water could occur on horizontal surfaces, such as shower benches or niches, waterproofing is required with ANSI A118.10 waterproofing membrane.

7. For dry untiled areas - for small areas where the USG Durock™ Brand Glass-Mat Tile Backerboard will not be tiled, such as board extending beyond the tiled area and abutting another surfaces, treat joints as follows. Seal board with Type 1 ceramic tile adhesive. (Mix four parts adhesive with one part water.) Embed USG Sheetrock® Brand Joint Tape and treat fasteners with USG Sheetrock® Brand Durabond® Setting-Type Joint Compound (45 or 90) applied in a conventional manner. Flat trowel setting-type compound over board to cover fasteners and fill voids to a smooth surface. Finish joints with at least two coast of USG Sheetrock® Brand Ready-Mixed All-Purpose Joint Compound. Do not apply ready-mixed or setting-type joint compound over unsealed board.

TECHNICAL DATA

Description	Unit of Measure	Test Method	15.9mm USG Durock* Brand Glass-Mat Tile Backerboard (UL Type SGX)	12.7mm USG Durock* Brand Glass-Mat Tile Backerboard
Weight	kg/m²	AST C473	12.2	8.3
Flexural strength	lbf	ASTM C473	>177(perpendicular) >100(parallel)	>177(perpendicular) >80(parallel)
Nail pull	lb(6.5 mm head diameter)	ASTM C473	>90	>70
Shear bond strength	psi	ANSI A118.1/ANSI A118.4/ANSI A136.1	>50	>50
Surface-burning characteristics	Flame spread/ smoke developed	ASTM E84	15/5	15/5
Fire resistance	-	-	Type X	-
Thermal resistance	hr-°F-ft²/Btu	ASTM C518	0.44	0.42
Mold resistance	-	ASTM D3273 10	10	10
Floor system service rating	Service rating	ASTM C627	see table below	See table below
Minimum bending radius	М	-	6	3.5
VOC	Pass/fail	CDPH V1.1	Pass	Pass
Permeability	Perm	ASTM E96 Procedure A	<3	<3

INTERIOR INSTALLATION, FINISHING AND DECORATING INSTALLATION

FLOOR SYSTEM SERVICE RATING

	Tile Size		
Joist spacing mm on center	50mm x 50mm	150mm x 150mm	200mm x 200mm
400 mm o.c	Residential	Light commercial	-
500 mm o.c	Residential	Light commercial	-
600 mm o.c	-	-	Light commercial



