

# EDUCATIONAL FACILITIES ARCHITECTURAL HANDBOOK



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# PRESENCE IN EDUCATIONAL FACILITIES

## KINGDOM OF SAUDI ARABIA

- Al Ghad International Colleges
- Al Imam University Extension
- Al Suwaiket Schools
- Dar Jana Schools
- Diba University
- Enrichment School
- Hail University-Faculty of Education
- Hail University-Faculty of Pharmacy
- Imam Mohammad Ibn Saud Islamic University-IMSIU
- International Programs School-IPS
- International Schools Group-ISG
- Islamic University
- KAUST Innovation Center, Thuwal
- KFU Abqaiq Community College
- King Abdulaziz University-KAAU
- King Abdullah University of Science and Technology
- King Fahd University of Petroleum and Minerals-KFUPM-Petroleum Building
- King Fahd University of Petroleum and Minerals-KFUPM-Faculty of Chemistry
- King Fahd University of Petroleum and Minerals-KFUPM-Faculty of Chemistry
- King Fahd University of Petroleum and Minerals-KFUPM-R&D Building
- King Fahd University of Petroleum and Minerals-KFUPM-R&D Building
- King Saud University
- Madac Academy
- Marketing Science Institute-MSI
- Najran University
- Princess Noura University-PNU
- Riyadh Schools-Tatweer Buildings Company
- Royal Commission Schools-C070
- Royal Commission University City
- Royal Commission University City-Auditorium
- Royal Commission-RC C22 School
- Royal Commission-RC C51 School
- Saudi Aramco Ajyal Schools
- Taif University
- Tatweer Buildings Company-TBC-Jizan Schools
- Technical Institute of Naval Studies
- Thuwal Town Development Schools
- Um Al Qura University Teaching Hospital

## BAHRAIN

- American University of Bahrain
- Athena School

## OMAN

- Sultan Qaboos University

## QATAR

- Al Manar Mall
- Doha City Center
- Doha Oasis
- Maseed Commercial Center
- Mesheireb Downtown, Doha
- Microsoft Office
- West Bay Complex

## UNITED ARAB EMIRATES

- Abu Dhabi Future School in Al Falah, Abu Dhabi
- Abu Dhabi Future School in Madinat Zayed, Abu Dhabi
- Abu Dhabi Future School in Al Gayathi, Abu Dhabi
- Abu Dhabi University, Abu Dhabi
- Al Mawakeb School in Al Khawaneej, Dubai
- American University of Sharjah, Sharjah
- American University in Dubai, Dubai
- GEMS School in Reem Island, Abu Dhabi
- Jumeirah English Speaking School, Dubai
- Le Lycée Libanais Francophone Private School, Dubai
- Raha International School, Abu Dhabi
- Signature Private Co-Education School, Dubai
- The School of Research, Dubai
- Zayed University, Abu Dhabi
- Emirates Schools in Al Barsha, Dubai
- Emirates Schools in Al Biddiya, Fujairah
- Emirates Schools in Dibba Al Fujairah, Fujairah
- Emirates Schools in Al Warqaa, Dubai
- Emirates Schools in Oud Al Mateena, Dubai
- Emirates Schools, Fujairah
- Liwa International School in Al Bateen, Al Ain
- Liwa Falaj Hazaa School, Al Ain
- Nord Anglia School in Reem Island, Abu Dhabi
- American Community School in Saadiyat Island, Abu Dhabi
- Sharjah Humanitarian City Schools, Sharjah
- Khorfakkan University, Fujairah
- Al Yasmina Shool Phase I, Abu Dhabi
- Jarir Bookstore, Dubai
- EM Normandie Business School, Dubai

## EGYPT

- Al Alamein International University-AIU

## LEBANON

- American University of Beirut-AUB
- Lebanese University, Hadath
- Lebanese University, Tripoli

## TURKEY

- 9 Eylul University
- Bandırma Onyedi Eylül University
- Bilgi University
- Dogu Akdeniz Student Dormitory
- Fetih College
- Hamit Sutmen Primary School
- Hizir Reis Primary School
- Ismet Aktan Primary School
- Kilis 7 Aralık University
- Mediha Tansel Primary School
- Sanko Schools
- Tubitak Scientific and Technological Research Center
- Yeni Nesil 2000 College

## CYPRUS

- Near East University



## PRINCESS NOURA UNIVERSITY-PNU

Royal decree was issued that established the first university for girls in Riyadh - Kingdom Of Saudi Arabia. The Princess Nourah bint Abdulrahman University is one of the successes of the care and attention that has been directed toward women’s higher education. Women’s education in the Kingdom of Saudi Arabia has been receiving a great deal of care and attention, which has allowed Saudi women to take confident and steady steps toward realizing their aspirations and has given them the opportunity to demonstrate excellence in various fields





# 1

## CREATING INSPIRING SPACES FOR FUTURE GENERATIONS OF LEARNERS

**This Educational Architectural Handbook aims to provide the architects and contractors with comprehensive guidance on designing and constructing educational facilities using USG Middle East Ceilings, Drywall and Finishes Materials** and serves as a valuable reference during the design and construction stages, focusing on key aspects such as acoustical design according to ANSI/ASA S12.60, fire design as per the ASTM and equivalent standards, and safety design.

By incorporating examples and practical advice, this handbook will empower professionals to create functional, aesthetically pleasing, and safe learning environments such as Preschools, Schools, Colleges, Universities, Libraries, Training Centers and Gymnasium.

The design of classrooms varies significantly depending on the intended age group, such as preschools and high schools. The conventional notion of a “classroom” as a space focused solely on the instructor is evolving. The rise of computer-based learning, video projection, and telecommunication requirements have prompted a reevaluation of traditional educational patterns and spatial dynamics.

Concerns for students’ health and well-being, especially among young learners, have led to an increased focus on improving the performance and structure of school buildings. Design strategies that prioritize factors like daylighting, the use of sustainable and non-toxic materials, and the integration of renewable energy sources are gaining traction in school design. However, the limited availability of resources for constructing, maintaining, and managing educational facilities remains an ongoing challenge.





# PERFORMANCE REFERENCES AND DEFINITIONS

The following referenced documents are essential for the application of this handbook

- ANSI/ASA S1.13, *American National Standard Measurement of Sound Pressure Levels in Air*
- ANSI/ASA S12.60-2010/Part 1, *AMERICAN NATIONAL STANDARD Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools, Part 1: Permanent Schools*
- ASTM E90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements*
- ASTM E336-09, *Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings*
- ASTM E413-04 (2009), *Classification for Rating Sound Insulation*
- ASTM E966-04, *Standard Guide for Field Measurements of Airborne Sound Insulation of Building Façades and Façade Elements*
- ASTM E1007-04e1, *Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission through Floor-Ceiling Assemblies and Associated Support Structures*
- ASTM E1332-90(2003), *Standard Classification for Determination of Outdoor-Indoor Transmission Class*
- IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*
- ANSI/Infocomm 1M-2009, *Audio Coverage Uniformity in Enclosed Listener Areas*

- **NOISE LEVEL OR SOUND LEVEL:** Terms employed interchangeably throughout this standard to represent the overall frequency-weighted sound pressure level of an airborne sound. This descriptor is used to express the strength of a sound in a manner related to how the ear perceives it. Noise level or sound level is expressed in decibels, unit symbol dB.
- **A-WEIGHTED SOUND LEVEL:** Sound pressure level measured with a conventional frequency weighting that roughly approximates how the human ear hears different frequency components of sounds at typical listening levels for speech. The A-weighting (see IEC 61672-1 in the above references) attenuates the low-frequency (or low-pitch) content of a sound. A-weighted sound level is expressed in decibels, unit symbol dB.
- **C-WEIGHTED SOUND LEVEL:** Sound pressure level measured with a conventional frequency weighting (see IEC 61672-1) that does not significantly attenuate the low-frequency (or low-pitch) content of a sound. C-weighted sound level is expressed in decibels, unit symbol dB.
- **ONE-HOUR AVERAGE A-WEIGHTED OR C-WEIGHTED SOUND LEVEL:** Level of the time-mean-square A-weighted or C-weighted sound pressure averaged over a one-hour period. One-hour average sound level is expressed in decibels, unit symbol dB.
- **REVERBERATION TIME:** A measure of the degree of reverberation in a space and equal to the time required for the level of a steady sound to decay by 60 dB after it has been turned off. Reverberation time is expressed in seconds, unit symbol s.
- **SOUND ABSORPTION AND REFLECTION:** Acoustical phenomena that occur whenever sound strikes a surface. For the calculation or measurement of reverberation time, absorbed sound is the portion of the sound energy striking a surface that is not returned as sound energy. Reflected sound is the remaining portion that bounces off the surface.
- **ATTENUATION OF AIRBORNE SOUND:** A measure of the decrease in sound level when sound passes through construction assemblies between spaces within a building, or from outside to inside. Attenuation is expressed in decibels, unit symbol dB.
- **SOUND TRANSMISSION CLASS:** A one-number rating of the sound-blocking ability of a partition, door, window, etc., calculated in accordance with ASTM E413 from measurements of one-third-octave band sound pressure levels and sound absorption made in a laboratory and in accordance with ASTM E90, abbreviation STC.
- **OUTDOOR-INDOOR TRANSMISSION CLASS (OITC):** A one-number rating of the sound-blocking ability of a partition, door, window, etc., calculated in accordance with ASTM E1332 from measurements of one-third-octave band sound pressure levels and sound absorption made in a laboratory and in accordance with ASTM E90, abbreviation OITC.
- **IMPACT INSULATION CLASS:** Single-number rating of structure-borne noise radiated below by a floor or floor-ceiling assembly when tested in a laboratory in accordance with ASTM E492 and calculated in accordance with ASTM E989; abbreviation IIC.
- **OUTDOOR TO INDOOR ATTENUATION OF AIRBORNE SOUND (OINIC):** is the measure of how effectively a building reduces the transmission of outdoor noise into indoor spaces.



“UNLEASH THE POWER OF SOUND:  
ACOUSTIC EXCELLENCE FOR EDUCATIONAL  
SPACES”



# PERFORMANCE CRITERIA FOR EXTERIOR SOURCE NOISE

The one-hour average A-weighted exterior-source background noise level within the enclosed space for the noisiest continuous one-hour period during times when learning activities take place shall not exceed the limits specified in the below Table 1.

The limits for the exterior-source background noise shall apply for the following conditions:

1. For the noisiest continuous one-hour period during times when learning activities take place
2. Portable and permanent (built-in) instructional equipment, such as computers and audiovisual equipment, are turned off.

TABLE 1: LIMITS ON A- AND C-WEIGHTED SOUND LEVELS OF BACKGROUND NOISE AND REVERBERATION TIMES IN UNOCCUPIED FURNISHED LEARNING SPACES

Learning space	Greatest one-hour average A- and C-weighted sound level of exterior source background noise <sup>3,4</sup> (dB)	Greatest one-hour average A- and C-weighted sound level of interior source background noise <sup>4,5</sup> (dB)	Maximum permitted reverberation times for sound pressure levels in octave bands with midband frequencies of 500, 1000 and 2000 Hz (s)
Core learning space <sup>1</sup> with enclosed volume ≤ 283 m <sup>3</sup> (≤ 10 000 ft <sup>3</sup> )	35 / 55	35 / 55	0.6 s <sup>6</sup>
Core learning space <sup>1</sup> with enclosed volume > 283 m <sup>3</sup> and ≤ 566 m <sup>3</sup> (> 10 000 ft <sup>3</sup> and ≤ 20 000 ft <sup>3</sup> )	35 / 55	35 / 55	0.7 s
All ancillary learning spaces <sup>2</sup> and core learning spaces with enclosed volumes > 566 m <sup>3</sup> (> 20 000 ft <sup>3</sup> )	40 / 60	40 / 60	No requirement

<sup>1</sup> Core Learning Space: Spaces for educational activities where the primary functions are teaching and learning and where good speech communication is critical to a student's academic achievement. These spaces include, but are not limited to, classrooms (enclosed or open plan), instructional pods or activity areas, group instruction rooms, libraries, and offices used for educational purposes.

<sup>2</sup> Ancillary learning spaces: Spaces where good communication is important to a student's educational progress but for which the primary educational functions are informal learning, social interaction, or similar activity other than formal instruction. These areas include, but are not limited to, corridors, cafeterias, gymnasias, and indoor swimming pools.

<sup>3</sup> The greatest one-hour average A- and C-weighted interior-source and the greatest one-hour average A- and C-weighted exterior-source background noise levels are evaluated independently and will normally occur at different locations in the room and at different times of day.

<sup>4</sup> The design location shall be at a height of 1 m above the floor and no closer than 1 m from a wall, window, or fixed object.

<sup>5</sup> Refer to Interior-source background noise in page 10.

<sup>6</sup> Refer to Performance criteria for reverberation times in page 12.



“IGNITE INSPIRATION, ENHANCE FOCUS:  
UNLEASH THE POTENTIAL OF ACOUSTIC  
DESIGN”



# PERFORMANCE CRITERIA FOR INTERIOR SOURCE NOISE

## 1. Limits on interior-source A- or C- weighted background noise levels from building services and utilities:

The one-hour average A- or C-weighted level of interior-source background noise shall not exceed the limits specified in the previous Table 1. Different equipment installed in the educational facilities may operate at multiple conditions resulting in different sound levels that contribute to the one-hour average A- or C-weighted sound level. The sound levels for the different conditions shall not exceed the limits in Table 2.

To ensure a conducive learning environment, it is important to mitigate disturbing tonal sounds caused by building services and utilities. These sounds, including hums, buzzes, whines, or whistles, should not interfere with speech communication or cause distractions or annoyance to occupants. If any such sounds cannot be controlled during the design phase, measures must be taken to mitigate them after construction. The prominence of tonal sounds should be quantified using ANSI/ASA S1.13 methods, and there should be no “prominent discrete tones” as defined in ANSI/ASA S1.13. This ensures that the learning spaces maintain a quiet and comfortable atmosphere for optimal concentration and focus.

TABLE 2: LIMITS ON ONE-HOUR AVERAGE A- AND C-WEIGHTED SOUND LEVELS FROM SOURCES ASSOCIATED WITH BUILDING SERVICES AND UTILITIES

Learning space	Building services and utilities capacities	Building services sound level limits (dB <sup>3</sup> )
Core learning space <sup>1</sup>	Maximum capacity	37 / 57
	Low capacity	34 / 54
Ancillary learning spaces <sup>2</sup>	Maximum capacity	42 / 62
	Low capacity	39 / 59

<sup>1</sup> Core Learning Space: Spaces for educational activities where the primary functions are teaching and learning and where good speech communication is critical to a student’s academic achievement. These spaces include, but are not limited to, classrooms (enclosed or open plan), instructional pods or activity areas, group instruction rooms, libraries, and offices used for educational purposes.

<sup>2</sup> Ancillary learning spaces: Spaces where good communication is important to a student’s educational progress but for which the primary educational functions are informal learning, social interaction, or similar activity other than formal instruction. These areas include, but are not limited to, corridors, cafeterias, gymnasias, and indoor swimming pools.

<sup>3</sup> To conform to the requirements of ANSI/ASA S12.60 Part 1.

## 2. Background noise in corridors:

When corridors adjacent to classrooms are used solely for conveyance of occupants within the school building and structured learning activities do not occur there, the one-hour average A-weighted background noise level in such corridors shall not exceed 45 dB.



“ BUILDING A SOUNDSCAPE OF SUCCESS:  
ACOUSTIC SOLUTIONS FOR EDUCATIONAL  
BRILLIANCE”



# PERFORMANCE CRITERIA FOR REVERBERATION TIMES

The reverberation times shall not exceed the limits specified in Table 1. Core learning spaces  $\leq 283 \text{ m}^3$  ( $\leq 10\,000 \text{ ft}^3$ ) shall be readily adaptable to allow reduction in reverberation time to 0.3 s. A classroom is readily adaptable if it can be readily improved through adding the required sound absorption as calculated with the Sabine equation (Equation 1). According to this formula, the minimum total sound absorption A needed to achieve a reverberation time of T60 seconds or less in a room of enclosed volume V is given by:

$$RT = 0.161 \cdot V / (A \cdot \alpha)$$

where:  
RT is the reverberation time in seconds  
V is the volume of the room in cubic meters  
A is the total absorption in the room in sabins (the unit of sound absorption)  
 $\alpha$  is the average sound absorption coefficient of the surfaces in the room

**(Equation 1)** 
$$A \geq kV / T_{60}$$

Suppose we have a rectangular classroom with the following dimensions:  
Length (L) = 10 meters, Width (W) = 8 meters, Height (H) = 3 meters

To calculate the reverberation time using the Sabine equation, we need to determine the total absorption (A) and the average sound absorption coefficient ( $\alpha$ ) for the surfaces in the room.

Let’s assume that the total absorption of the room is 1000 sabins (A = 1000) and the average sound absorption coefficient is 0.2 ( $\alpha = 0.2$ ).

Using the Sabine equation:  
$$RT = 0.161 \cdot V / (A \cdot \alpha)$$

First, calculate the volume (V) of the room:  
$$V = L \cdot W \cdot H = 10 \cdot 8 \cdot 3 = 240 \text{ cubic meters}$$

Next, plug in the values into the Sabine equation:  
$$RT = 0.161 \cdot 240 / (1000 \cdot 0.2)$$
$$RT = 0.161 \cdot 240 / 200$$
$$RT = 0.1932 \text{ seconds}$$

In this example, the reverberation time for the classroom is approximately 0.1932 seconds. This value indicates how long it takes for sound to decay by 60 decibels in the room. Adjusting the total absorption or average sound absorption coefficient can help control the reverberation time to achieve the desired acoustic conditions for the classroom. It shall be shown, or be readily apparent, that available surface area to add new sound absorptive materials (carpet, wall panels, etc.) on existing sound reflective finishes and/or additional sound absorption from improving readily upgradable existing acoustical finishes, such as replacing ceiling panels, are together adequate to provide the required sound absorption. For purposes of this standard, no further calculations are required if it can be shown that the area of reflective wall or ceiling area readily available for adding sound absorptive finishes is at least the lesser of 80 m² or 0.28 V m² where V is the room volume in m³.



“SOUND WAVES HARMONIZE WITH LEARNING:  
ELEVATE EDUCATION WITH ACOUSTIC  
CEILINGS”



Outdoor-to-indoor attenuation of airborne sound:

1. The indoor background noise level in classrooms is influenced by two factors:

- a. the noise environment outside the building
- b. the reduction of exterior noise as it enters the building.

It is the responsibility of the user representative, such as the design architect, to determine and specify the site's exterior noise environment. This can be determined by conducting a site assessment to measure the highest one-hour average A-weighted sound level outside the proposed location of the classroom or core learning space during school hours.

2. In addition to reducing the interior A-weighted sound levels below 35 dB and the corresponding C-weighted sound levels below 55 dB, all newly constructed core learning spaces must meet a minimum Outdoor-Indoor Transmission Class (OITC) as specified in Table 3. If the walls contain windows, doors, or ventilation penetrations, the composite structure, including these elements, must meet the OITC requirement.

3. When an exterior walkway is within 3 meters or a playground is within 9 to 15 meters of the exterior wall of a core learning space, the basic wall must have a Sound Transmission Class (STC) rating of at least 45, and exterior doors must have an STC rating of at least 30 dB. If windows are present in such walls within 3 meters of an exterior walkway or within 9 to 15 meters of a playground, the composite STC rating of the wall, including the windows and doors, must be at least 40 dB. If a playground is closer than 9 meters to the wall of a core learning space, the composite STC rating of the exterior wall must be at least 50 dB, except when the playground is dedicated for use exclusively by the adjacent learning space and remains inactive during core learning activities.

TABLE 3: MINIMUM OITC RATING FOR CORE LEARNING SPACES

A-weighted outdoor noise level (dB) <sup>1, 2</sup>	OITC rating walls with windows	OITC rating roofs and walls without windows
≤ 55	30	36
56	31	37
57	32	38
58	33	39
59	34	40
60	35	41
61	35	41
62	36	42
63	37	43
64	38	44
65	39	45
66	39	45
67	40	46
68	41	47
69	42	48
70	43	49
71	43	49
72	44	50
73	45	51
74	46	52
75	47	53
76	47	53
77	48	54
78	49	55
79	50	56
80	50	56
>80	Not permitted	Not permitted

<sup>1</sup> See point number 1 in the above “Outdoor-to-indoor attenuation of airborne sound”

<sup>2</sup> See performance criteria for exterior source noise in page 8.



“SOUNDPROOF THE FUTURE OF EDUCATION: INNOVATE WITH ACOUSTIC CEILINGS AND WALLS”



# NOISE ISOLATION DESIGN REQUIREMENTS

**Indoor-to-indoor attenuation of airborne sound:**

1. Wall and floor-ceiling assemblies that separate enclosed or open-plan core learning spaces from adjacent areas must be designed to meet the minimum Sound Transmission Class (STC) ratings stated in Table 4. These STC rating requirements also apply to the design of temporary partitions used to divide a learning space.

**TABLE 4: MINIMUM STC RATINGS REQUIRED FOR SINGLE OR COMPOSITE INTERIOR WALL AND FLOOR-CEILING ASSEMBLIES THAT SEPARATE AN ENCLOSED CORE LEARNING SPACE FROM AN ADJACENT SPACE**

Corridor, staircase, office, or conference room <sup>1,2</sup>	ADJACENT SPACE <sup>7</sup>			
	Corridor, staircase, office, or conference room <sup>1,2</sup>	Other enclosed or open plan core learning space, therapy room, health care room, prayer room and space requiring a high degree of acoustical privacy <sup>3,4</sup>	Common-use and public-use toilet room and bathing room <sup>5</sup>	Music room, music performance space, auditorium, mechanical equipment room <sup>5</sup> , cafeteria, gymnasium, or indoor swimming pool
Core learning space	45	50	53	60
Ancillary learning space	45	45	45	60 <sup>6</sup>

<sup>1</sup> For corridor, office, or conference room walls containing doors, the basic wall, exclusive of the door, shall have an STC rating as shown in the appropriate column in this table. The entrance door shall conform to the table 7.

<sup>2</sup> When acoustical privacy is required, the minimum composite STC rating, including the effects of doors, of the partitions around an office or conference room, shall be increased to 50.

<sup>3</sup> These requirements do not apply to toilets opening only into the core learning space and used only by occupants of the core learning space.

<sup>4</sup> Typical 156mm USG ME wall assembly of two layers gypsum board of each side with 50mm insulation thick (refer to wall 1 in table 7 page 24 of this guide), sealed on both sides, acoustically sealed at the entire perimeter and extending from the floor slab to the structural deck above.

<sup>5</sup> The isolation between core learning spaces and mechanical equipment rooms shall have a STC rating of 60 or greater unless it is shown that the sound level in the mechanical equipment room combined with a lower STC rating can achieve the required sound level in the core learning space. In no case shall the design STC between such spaces be less than 45.

<sup>6</sup> When the corridor will not be used as an ancillary learning space, the minimum STC rating may be reduced to not less than 45. Use of corridors as ancillary learning spaces should be avoided when they are located next to the noisy spaces indicated in the table by the high STC ratings.

<sup>7</sup> Refer to table 7.

2. All penetrations within sound-rated partitions must be properly sealed and treated as necessary to achieve the required Sound Transmission Class (STC) ratings. Attention should be given to potential flanking paths that could compromise the sound isolation between spaces.
3. For walls with doors separating a core learning space from corridors or stairwells, the minimum STC ratings specified in Table 4 apply to the wall excluding the door. For walls with doors between a core learning space and offices, conference rooms, or toilets that open only to the core learning space, the minimum STC ratings of Table 4 apply to the wall excluding the door. In all other cases, the STC rating applies to the overall construction, including doors, windows, penetrations, etc.
4. Interior door assemblies and up to 1 m<sup>2</sup> of window glazing area immediately adjacent to the door opening into core learning spaces from corridors, stairways, offices, or conference rooms should achieve a minimum STC rating of 30 dB when in their operable condition. The STC rating for interior entry doors into music rooms from corridors or staircase areas should be at least 40 dB if such doors are within 9 m of a door to a core learning space. A vestibule entry composed of two sets of doors with STC ratings of 30 dB or greater will be considered compliant with the STC 40 dB requirement.
5. The determination of whether an office or conference room requires a high level of acoustical privacy lies with the user representative, such as the design architect. If deemed necessary, the STC rating between these designated spaces and adjacent areas should be at least 50.



“AMPLIFY LEARNING, DAMPEN DISTRACTIONS: ARCHITECTURAL ACOUSTICS FOR EDUCATIONAL EXCELLENCE”



# SAFETY DESIGN AND COMPLIANCE

## 1. ENVIRONMENTAL AIR QUALITY

USG ME’s ceiling panels do not contain asbestos, carcinogens, mutagens, or toxic substances. Our ceiling products are classified and certified to have low impact on indoor air quality. Even when installed in a fully furnished room with little fresh air, the concentration of VOCs and Formaldehyde are well below accepted standards.

## 2. HYGIENE CEILING FOR EDUCATIONAL FACILITIES

Our ceiling panels support healthy environments in all healthcare facilities according to the most stringent international standards:

### 1. Antibacterial Coating

Antimicrobial coating will provide lasting protection against microbes, harmful bacteria, mold, and fungus—ultimately helping to minimize stains, bad odors, and material degradation. Antimicrobial coating is more durable and lasts longer by making your ceiling systems less susceptible to mold growth and associated odors.

### 2. Clean Room Classification\*

We provide ceiling panels Classified as Clean Room ISO 4 and ISO 5 as per ISO 14644-1

### 3. Water Absorbance

As per a project request, we provide a layer of absorbent material on our ceiling panels to resist a moderate amount of dripping water for up to 2 hours.

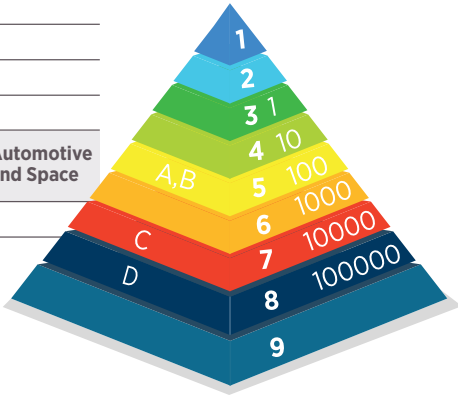
### 4. FGI Guidelines

The Facility Guidelines Institute (FGI) is a non-profit organization that works to develop guidelines for designing and building hospitals and other healthcare facilities. USG Middle East has developed a selected ceiling systems that follow the latest FGI requirements.

### 5. Mold Prevention

Almost all of USG Middle East’s ceiling panels are rated a 10 as per the ASTM D3273 scale for mold prevention applications.

* Clean Room™ Classification						
FED STD 209D/209E		ISO 14644-1	Industry Application Areas			
English	Metric	ISO Class				
-	-	1				
-	-	2				
1	M1.5	3	Micro-electronics			
10	M2.5	4				
100	M3.5	5				
1,000	M4.5	6		Pharmaceutical	Electronics and Food	Automotive and Space
10,000	M5.5	7				
100,000	M6.5	8				
-	-	9				



“ A SYMPHONY OF SAFETY AND SOUND: ARCHITECTURAL SOLUTIONS FOR EDUCATIONAL ENVIRONMENTS”



USG ME RECOMMENDED CEILINGS FOR CORE LEARNING SPACES

TABLE 5: RECOMMENDED CEILINGS FOR CORE LEARNING SPACES

USG ME CEILING RECOMMENDATION		Classrooms (Enclosed or Open Plan Learning Space)	Auditorium, Music Room	Conference Room	Group Instruction Rooms	Instructional Pods or Activity Areas	Libraries	Offices Used for Educational Purposes
Celebretto® Metal Ceiling Solutions	Corridor System							
	Geometrix							
	Paraline Baffles							
	Clip-in							
	Lay-in							
Acoustical Drywall Ceiling	Monosilent Monolithic Ceiling							
	Skyrock® Ecoblock Perforated Gypsum Board							
Skynest® Wood Wool	Skynest® Wood Wool suspended ceiling							
	Skynest® Wood Wool Canopies							
	Skynest® Wood Wool Baffles							
Soft Fiber Ceiling	Louna™ Baffle							
	Louna™ Elegant							
	Halcyon™							
	Halcyon™ Canopy							
Gypsum Ceiling Tiles	Soundblock Perforated Gypsum Tile							
Mineral Fiber Ceiling	Athena							
	Favia Acoustic							
	Olympia™							
	Olympia Micro™							
	Radar							
	Skylite Acoustic							
	Sonata							
	Taiga Hygiene							
EDGE DETAILS	SQ Edge	SLT Edge	SL Edge	FLB Edge	FL Edge			
PEDESTAL Edge	Concealed BESK Edge	Concealed S-BESK Edge	Concealed D-BESK Edge					

USG ME RECOMMENDED CEILINGS FOR ANCILLARY LEARNING SPACES

TABLE 6: RECOMMENDED CEILINGS FOR ANCILLARY LEARNING SPACES

USG ME CEILING RECOMMENDATION		Cafeteria	Corridors	Gymnasia	Healthcare Room or Therapy Room	Mechanical Equipment Room	Prayer Room	Public-Use Toilet Room and Bathing Room
Celebretto® Metal Ceiling Solutions	Corridor System							
	Geometrix							
	Paraline Baffles							
	Clip-in							
	Lay-in							
Acoustical Drywall Ceiling	Monosilent Monolithic Ceiling							
	Skyrock® Ecoblock Perforated Gypsum Board							
Skynest® Wood Wool	Skynest® Wood Wool suspended ceiling							
	Skynest® Wood Wool Canopies							
	Skynest® Wood Wool Baffles							
Soft Fiber Ceiling	Louna™ Baffle							
	Louna™ Elegant							
	Halcyon™							
	Halcyon™ Canopy							
Gypsum Ceiling Tiles	Soundblock Perforated Gypsum Tile							
Mineral Fiber Ceiling	Athena							
	Favia Acoustic							
	Olympia™							
	Olympia Micro™							
	Radar							
	Skylite Acoustic							
	Sonata							
	Taiga Hygiene							





USG ME RECOMMENDED WALL PARTITION FOR CORE AND ANCILLARY LEARNING SPACES

TABLE 7: RECOMMENDED WALL PARTITION FOR CORE AND ANCILLARY LEARNING SPACES

<b>WALL 1</b> Single Stud With Two Layer Each Side (Regular Or Fire Rated )		<b>WALL 2</b> Single Stud With Two Layer Each Side Wet Area (Regular Or Fire Rated )		<b>WALL 3</b> Chase Wall With Two Layer Each Side (Regular Or Fire Rated )	
<b>Type</b>	Regular or Fire Rated	<b>Type</b>	Wet Area	<b>Type</b>	Regular or Fire Rated
<b>Description</b>	2 Layers of Regular or Fire Rated Gypsum Board	<b>Description</b>	2 Layers of Moisture Resistant Gypsum Board or Cement Board on Wet Side of Stud, 2 Layers of Gypsum Board on Other Side of Stud	<b>Description</b>	Double Stud. 2 Layers of Regular or Fire Rated Gypsum Board on Both Sides of Stud
<b>Stud Size</b>	92mm	<b>Stud Size</b>	70 mm	<b>Stud Size</b>	2x92mm
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design
<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	As Per Design
<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	From Wet Side of Stud	<b>Moisture Resistance</b>	N/A
<b>WALL 4</b> Chase Wall With Two Layer Each Side (Moisture Resistant )		<b>WALL 5</b> Shaft System With Two Layer (Fire Rated )		<b>WALL 6</b> Shaft System With Two Layer Wet Area (Fire Rated )	
<b>Type</b>	Wet Area	<b>Type</b>	Fire Rated	<b>Type</b>	Fire Rated Wet Area
<b>Description</b>	Double Stud. 2 Layers of Moisture Resistant Gypsum Board or Cement Board on Both Sides of Stud	<b>Description</b>	2 Layers of Fire Rated Gypsum Board on One Side of CH Stud	<b>Description</b>	2 Layers of Fire Rated Moisture Resistant Gypsum Board or Cement Board on One Side of CH Stud
<b>Stud Size</b>	2x92mm	<b>Stud Size</b>	50mm	<b>Stud Size</b>	92mm
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design
<b>Fire Rating</b>	As Per Design	<b>Fire Rating</b>	Yes	<b>Fire Rating</b>	Yes
<b>Moisture Resistance</b>	From Both Side of Stud	<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	From Wet Side of the CH Stud
<b>WALL 7</b> Lining Wall Single Stud With Two Layer (Non Fire Rated)		<b>WALL 8</b> Lining Wall Single Stud With Two Layer Wet Area (Non Fire Rated)			
<b>Type</b>	Non Fire Rated	<b>Type</b>	Wet Area Non Fire Rated		
<b>Description</b>	2 Layers of Gypsum Board on One Side of the Stud	<b>Description</b>	2 Layers of Moisture Resistant Gypsum Board or Cement Board On One Side of the Stud		
<b>Stud Size</b>	92mm	<b>Stud Size</b>	92mm		
<b>Panel Thickness</b>	As Per Design	<b>Panel Thickness</b>	As Per Design		
<b>Fire Rating</b>	Non-Rated	<b>Fire Rating</b>	Non-Rated		
<b>Moisture Resistance</b>	N/A	<b>Moisture Resistance</b>	Yes		

TABLE 8: USG ME RECOMMENDED WALLBOARDS PRODUCTS

BRAND	WALLBOARD	WALL TYPE
SHEETROCK® BRAND	REGULAR BOARD 12.7mm	WALL 1 WALL 2 WALL 3 WALL 5 WALL 6
	FIRECODE® TYPE X 15.9mm	
	FIRECODE® TYPE C 12.7mm and 15.9mm	
	WETSTOP 12.7mm and 15.9mm	
	GYPSUM LINER PANEL 25.5mm	
SECUROCK® BRAND	GLASS-MAT SHEATHING TYPE X 15.9mm	WALL 2 WALL 4 WALL 6 WALL 8
	GLASS-MAT SHEATHING 12.7mm	
	GLASS-MAT MOLD TOUGH® FIRECODE® LINER PANEL 25.5mm	
USG ME AND SKYROCK® BRANDS	REGULAR BOARD 9.5mm, 12.5mm and 15mm	WALL 1 WALL 2 WALL 3 WALL 4 WALL 5 WALL 6 WALL 7 WALL 8
	FIRE RATED (FR) 12.5mm and 15mm	
	FIRE MOISTURE RESISTANT (FMR) 12.5mm and 15mm	
	MOISTURE RESISTANT (MR) 12.5mm and 15mm	
	MOLD AND MOISTURE RESISTANT (MMR) 12.5mm and 15mm	
	FIRE RESISTANT MOISTURE RESISTANT (FRMR) 12.5mm and 16mm	
	IMPACT FIRE RESISTANT (IFR) 12.7mm and 15.9mm	
	IMPACT FIRE MOISTURE RESISTANT (IFMR) 12.7mm and 15.9mm	
SOLIDROCK® BRAND	FIBER CEMENT BOARD 6mm, 9mm, 12mm, 16mm and 18mm	WALL 2, WALL 4 WALL 6, WALL 8

TABLE 9: SINGLE AND DOUBLE BOARD SYSTEM 15.9MM STANDARD BOARD PERFORMANCE

Single Board

STUD SIZE AT 600MM CTC	60	60	70	70	90	90	148	148
Thickness	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.7
Acoustic	46	46	47	47	47	47	48	48
Max Height at 600	3.6	3.6	4.2	4.4	4.9	5.1	6.5	6.7
Max Height at 400	3.8	4.0	4.4	4.6	5.1	5.3	6.7	6.9
Duty Rating¹	MD	MD	MD	MD	MD	MD	MD	MD

Double Board

STUD SIZE AT 600MM CTC	60	60	70	70	90	90	148	148
Thickness	0.6	0.7	0.6	0.7	0.6	0.7	0.6	0.7
Acoustic	53	53	54	54	55	55	56	56
Max Height at 600	4.0	4.1	4.4	4.6	5.4	5.6	7.8	8.0
Max Height at 400	4.1	4.3	4.6	4.8	5.6	5.8	8	8.2
Duty Rating¹	SD	SD	SD	SD	SD	SD	SD	SD

¹ • Medium duty MD      • Severe duty SD  
Please refer to USG ME Technical Department for system design



# 2



## CEILINGS FOR EDUCATIONAL FACILITIES

 | **100%** | SOUND CONTROL AND NOISE REDUCTION

 | **20+** | ARCHITECTURAL CEILINGS DESIGNS

 | **89%** | UP TO 89% LIGHT REFLECTANCE

 | **CLASS A** | FIRE SAFETY

 | **ISO 5** | CLEAN ROOM CLASSIFICATION ISO 3, 4 AND ISO 5 AS PER ISO 14644-1

 | **RATED 10** | MOLD PREVENTION RATED A 10 AS PER THE ASTM D3273

 | **100%** | ANTIBACTERIAL COATING





## CELEBRETTO® METAL CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

### CORRIDOR SYSTEM - HOOK ON

Celebretto®'s Corridor System - Hook on, a revolutionary corridor ceiling suspension system that eliminates threaded rods & vertical hangers. USG ME offers metal ceiling solutions with exceptional acoustical performance and various sound-absorbing backing options. The system features secure perimeter trimmings, allowing easy panel installation & removal. With continuous wall profiles & movable connections, it provides enhanced CAC, high LR, high NRC & meets Class A surface burning characteristics.



### GEOMETRIX

Remarkable collection of 3D Metal Panels that add depth and dimension to ceilings. Architects and project managers have endless design possibilities with Geometrix, whether creating intricate 3D designs or incorporating random patterns for diverse aesthetics. These panels are easy to install and provide complete ceiling accessibility. Mix and match various sizes, shapes, colors, and materials to bring movement, texture, and personalized depth to your project.



### PARALINE BAFFLES

Versatile metal baffles for improved acoustics and easy plenum access. Choose from various sizes, dimensions, patterns, and finishes to match any interior design. These modern panels work both indoors and outdoors, offering flexibility in creating dynamic ceilings with sleek lines or gentle waves. With snap-up construction, they allow unlimited access. Perfect for Group Instruction Rooms in Core Learning Spaces. Customize acoustical performance with material selection and system pan style.



### CLIP-IN | LAY-IN

Clip-in: Elevate interiors with USG ME Clip-in Metal Ceiling. Choose from perforated or plain panels, enjoy excellent acoustical performance, easy cleaning, and secure fixation. Ideal for Ancillary Learning Spaces.  
Lay-in: Enhance interiors affordably with USG ME Lay-in Metal Ceiling. Diverse perforated designs, easy installation & superior paint adherence. Enjoy quick access to plenum space without tools. Explore our range of acoustical options for optimal performance. Ideal for Instructional Pods or Activity Areas.



## ACOUSTICAL DRYWALL CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

### MONOSILENT MONOLITHIC CEILING

Achieve exceptional acoustics with USG Middle East Monolithic Acoustical Ceiling System. Lightweight, non-combustible, and high-performing with up to 0.95 NRC and 43 CAC. Create seamless ceilings using our 12.5mm thick screw-fixed gypsum panels and USG Middle East Spray Applied Finish. Enhance aesthetics and sound absorption while meeting noise reduction and fire safety standards. High LR, high NRC, and Class A surface burning characteristics.



### SKYROCK® ECOBLOCK PERFORATED GYPSUM BOARD

Skyrock Ecoblock Perforation panels, featuring a specially formulated core and recycled liner papers for sustainability. These precision-engineered gypsum boards have recessed edges for seamless installation. The panels are punched to specification and backed on request with a non-woven acoustic mat for enhanced sound absorption. Choose from patterns like R6, R12, Q3, Q9, Q12, and R8-15-20 to achieve your desired aesthetic. Enjoy impressive NRC ratings up to 0.95 and Class A fire performance as per E84 standards.



## GYPSUM CEILING TILES CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

### SOUNDBLOCK PERFORATED GYPSUM TILE

Designed for exceptional acoustic performance. These gypsum tiles are precision-punched to specification, ensuring optimal sound absorption. Choose from perforation patterns like R6, Q3, Q9, Q12, and R8-15-20 to suit your design needs. With NRC ratings up to 0.75 and Class A fire performance according to E84 standards, these tiles offer both functional and aesthetic benefits. Available in 600x600mm and 600x1200mm sizes to accommodate your educational project requirements.





## SKYNEST® WOOD WOOL CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

### SKYNEST® WOOD WOOL SUSPENDED CEILING

Experience outstanding acoustical performance with Skynest® Acoustic Wood Wool Suspended Ceiling. Crafted from premium wood wool and cement, this lay-in system offers superior sound absorption (up to 1NRC) and exceptional thermal insulation. It adds both acoustic and aesthetic value to instructional pods and activity areas in core learning spaces. With a unique surface texture and a wide range of colors to choose from, these wood wool panels create a comfortable micro-climate, ideal for spaces constructed with natural materials.



### SKYNEST® WOOD WOOL CANOPIES

Crafted from high-quality wood wool and cement, offer excellent acoustic and thermal insulation for wooden ceilings. Ideal for instructional pods and activity areas in core learning spaces, these canopies provide both functionality and aesthetic appeal. With their ability to withstand varying humidity and temperature, they are versatile for different environments. The original surface texture allows for a multitude of color options. Available in a wide range of configuration designs.



### SKYNEST® WOOD WOOL BAFFLES

Exceptional acoustical performance (up to 0.65 NRC) - Skynest® Acoustic Wood Wool Baffles. These high-quality wooden ceiling panels, made from wood wool and cement, provide superior sound absorption and thermal insulation. Perfect for interior wood ceiling applications, they are an ideal choice for instructional pods and activity areas in core learning spaces. Available in various baffle configurations, they offer design versatility. With their unique surface texture and a wide range of colors, these panels enhance aesthetics while ensuring a comfortable micro-climate in any environment.



## SOFT FIBER CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

### LOUNA™ BAFFLE

Featuring Stone wool soft fiber, adds a distinctive design element to any space, serving as a striking accent or full-room installation. With vertical hanging acoustic boards and encapsulated edges, Louna™ Baffle panels are easily installed and provide accessibility. Offer a simple-to-install acoustical solution, absorbing unwanted sounds while delivering an exquisite aesthetic. With excellent NRC and high LR, these Class A panels ensure anti-mold and mildew properties for a safe and functional environment.



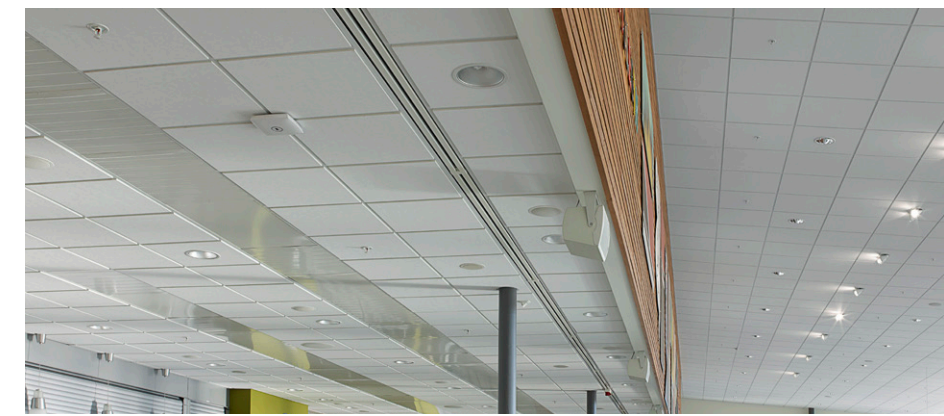
### LOUNA™ ELEGANT

Achieve excellent noise attenuation and reduction with Louna™ Elegant Acoustical Ceilings, featuring up to NRC-0.95 and CAC-39. Enjoy energy-efficient lighting and minimal wear with high light reflectance (LR-0.88). A time-saving installation for a seamless aesthetic. The reverse side offers a high-performance mineral fleece membrane and an elegant acoustical facing. Washable, scrubbable, scratch-resistant & impact-resistant. Perfect for classrooms and open plan learning spaces.



### HALCYON™

Achieve exceptional sound absorption and high light reflectance with Halcyon™ Acoustical Ceiling. This fiberglass substrate offers a washable and scrubbable finish, along with resistance to sag, mold, and mildew. Ideal for both visual accents and acoustical control, the fine-textured panels with ClimaPlus™ Performance provide outstanding acoustical absorption and durability. They are perfect for classrooms and open plan learning spaces. With a range of sizes and edges including the concealed edge.



### HALCYON™ CANOPY

Halcyon™ Canopy, made of fiberglass substrate, offers exceptional sound absorption and high light reflectance. With a washable and scrubbable finish, it resists sag, mold, and mildew, making it ideal for visual accents and acoustical control. The panels, available in various styles, sizes, and colors, reduce reverberation and improve acoustical performance. They are easy to install with included mounting hardware.





# MINERAL FIBER CEILING SOLUTIONS FOR EDUCATIONAL FACILITIES

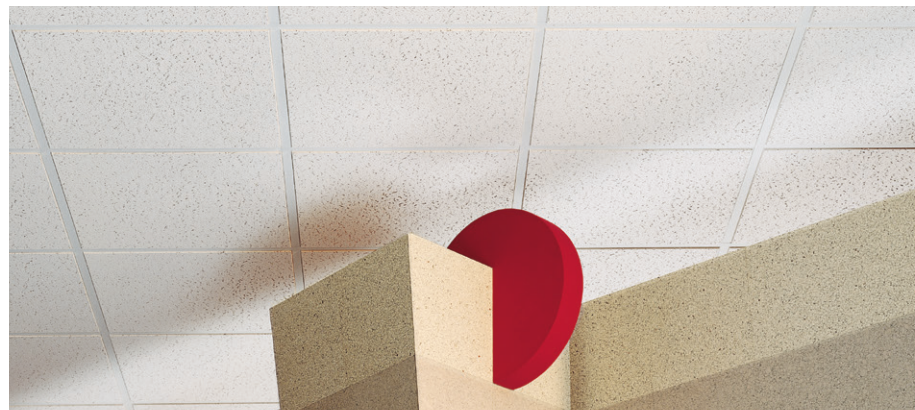
## ATHENA

Cost-effective, easy to install, and offer exceptional sound absorption. With a non-directional design, they are ideal for Classrooms (Enclosed or Open Plan Learning Space). The water-felted manufacturing technique ensures excellent Ceiling Attenuation Class (CAC) performance. These panels enhance aesthetics and provide good light reflectivity. They are fire-resistant and available in various sizes. Offer economical solution for suspended ceiling systems, with customization options for washable and hygienic paint.



## FAVIA ACOUSTIC

Offer high-range sound attenuation and absorption, with up to 0.65 NRC and 37 CAC. Suitable for Classrooms (Enclosed or Open Plan Learning Space), they effectively reduce unwanted noise and have high humidity resistance in ClimaPlus. They are easy to trim and install, making them versatile for various applications. These ceilings meet low emissions criteria. They feature an elegant light-textured design with a micro-fissured non-directional pattern for a clean appearance.



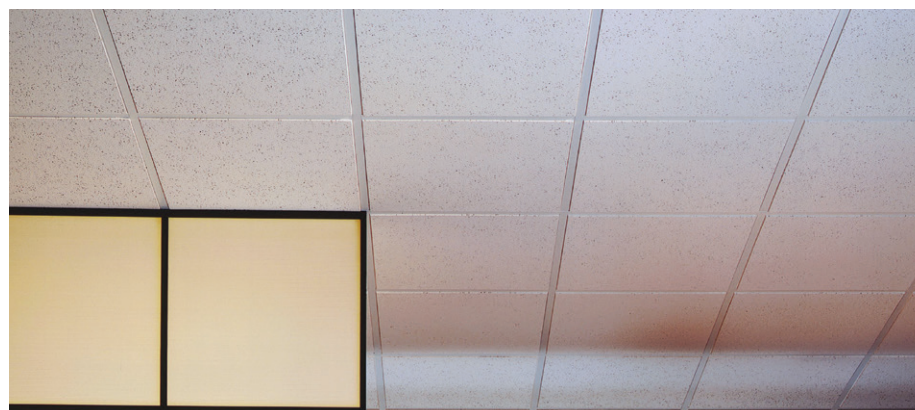
## OLYMPIA™

Offered for Classrooms (Enclosed or Open Plan Learning Space) as a cost-effective & sag-resistant. It features a proprietary superior performance formulation that inhibits the growth of mold and mildew. With a non-directional pattern, these panels reduce installation time and waste. The finely granulated surface texture adds a delicate aesthetic, while the high light reflectance (up to LR-0.88) reduces energy usage and wear on light fixtures. Available in ClimaPlus™ formulation for humidity resistance and various plank sizes.



## OLYMPIA MICRO™

Utilizing ClimaPlus™ Performance, Olympia Micro™ Acoustical Ceiling Panels feature micro perforations that provide a smoother aesthetic and effective sound absorption at a mid-range price. These panels are ideal for classrooms in Core Learning Spaces, offering high light reflectance, mold and mildew resistance, ceiling attenuation, and noise absorption. The panels have a balanced acoustics design with high NRC and CAC values, making them suitable for critical lighting applications.



## RADAR

Affordable, medium-textured mineral fiber panels with a distinctive non-directional pattern and anti-sag performance. These panels offer outstanding sound absorption, easy cleaning, and quick installation, making them suitable for schools. With a water-felted production method, they provide good ceiling attenuation class (CAC) performance and fall into the category of low-emitting ceiling panels. Available in High Recycled Content (HRC) formulations, ensuring sustainability, and offer high NRC and CAC values for excellent acoustics.



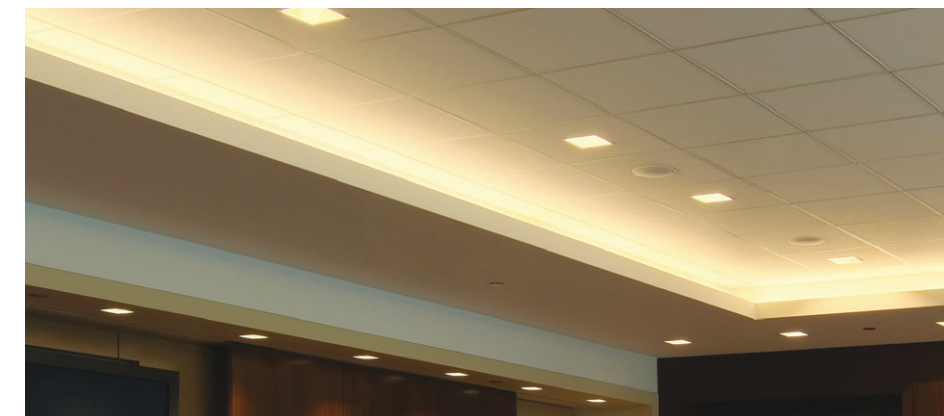
## SKYLITE ACOUSTIC

Excels in non-combustibility, heat insulation, decoration, fire resistance, and sound absorption. The R6 perforated design meets the demand for strong sound control with a contemporary style, leaving the surface nearly pore-free. Skylite Acoustic Ceiling Tiles are ideal for educational buildings, offering high humidity resistance and excellent lighting reflectance. They are also suitable for offices requiring sound control, with high NRC, CAC, light reflectance, and LEED® qualities.



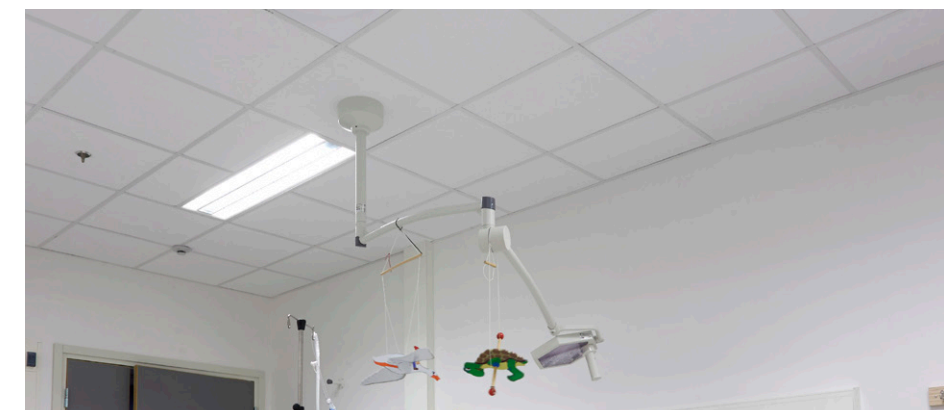
## SONATA

These highly absorbent acoustical tiles are made from mineral wool. It offers high-NRC and high-CAC values, achieving excellent noise attenuation and reduction (up to NRC-0.80) (up to CAC-40). Sonata complies with EN 717-1 for formaldehyde emissions and achieves Class E1 rating. The fine, monolithic texture provides maximum light reflectance (LR 0.89), reducing energy and light fixture usage. Durable, cleanable & resistant to impact and scratches. It has a Class 10 rating for mold prevention (ASTM D3273).



## TAIGA HYGIENE

Meet ISO 4 standards (ISO 14644-1:2015). These ClimaPlus™ panels feature a special fungicide treatment for enhanced resistance to microorganism growth & easy cleanability. Resist mold and mildew. Taiga Hygiene offers high light reflectance (86%) and excellent humidity resistance, making them ideal for applications with intermittent heating and cooling in Ancillary Learning Spaces. Developed to meet strict hygiene standards to ensure a clean and safe educational environment.





# FINISHING SOLUTIONS

Offering the industry's broadest selection of finishing solutions, our high-quality drywall compounds, joint tapes, beads, and trims provide superior performance on every job, every time. Whether you're taping, applying a finish coat, or patching a crack, there is a USG finishing product to meet your needs. Builders, project managers, and architects can count on our broadest selection of finishing solutions to deliver.

## 1. GYPSUM SURFACE FINISHING SOLUTIONS

USG Middle East gypsum surface finishing solutions provides professional-grade performance. Sheetrock® Brand All Purpose Joint Compound and Premium Premix are combines single-package convenience with good taping and topping performance. Recommended for laminating and repairing cracks in interior plaster and masonry not subject to moisture, these compounds feature great open time and cold bond, and has smooth and slick properties. This joint compound qualifies as a low VOC emitting material and complies with ASTM C475. The Gypsum Plaster Setting-Type of Easycoat 30 and Easyjoint™ 60 provides quick set times allow for one-day drywall finishing and next-day decoration of drywalls in interiors and exterior areas. Let our setting-type collection set the pace with a range of formulations that provide a choice in setting times. They provide low shrinkage and superior bond, which make them excellent for projects like laminating gypsum panels, acoustical gypsum boards and above-grade all gypsum surfaces.

## 2. CEMENT SURFACES FINISHING SOLUTIONS

Concrete plaster is a type of plaster that is made from a mixture of Portland cement, sand, and water. It is a strong and durable material that is often used as a finish for walls and ceilings. Unlike traditional plaster, which is made from gypsum, concrete plaster is not as brittle and is more resistant to water damage. It is typically applied in multiple layers and can be finished with a variety of textures, depending on the desired look.

Our concrete plaster includes Durock® & General Purpose Setting-Type Basecoat, Easycoat Advanced Formula Ready-Mix and other cementitious surfaces finishing products are commonly used as a finish for both interior and exterior walls and ceilings. This range is often applied to concrete, brick, or masonry surfaces to create a smooth, durable finish. Concrete plaster is also used to repair and resurface damaged walls and ceilings, and to cover up imperfections in the underlying surface. In addition, concrete plaster can be used to create decorative elements such as moldings, cornices, and ceiling medallions. Used in the construction of swimming pools, to create a smooth, waterproof finish.

## 3. ACOUSTICAL CEILINGS FINISHING SOLUTIONS

Acoustical plasterboard ceilings require special finishing materials to achieve the required acoustic performance. We offer the Monosilent Compound for the acoustical ceiling joint treatment which is specially formulated to achieve very low shrinkage joint compound for acoustical plasterboard ceilings.

USG ME also offers highly engineered, acoustically transparent spray-applied finish of Monosilent Spray-Applied Finish and Mac Spray-Applied Finish. Sprayed with pneumatic spray texture equipment and yields a fine finish, with a monolithic appearance. The Acoustical transparent finish is available in a standard white color and available in other RAL colors to meet the architect choice.



## 4. BONDING SOLUTIONS

Our Setting-Type Bonding Premium Compounds are a plaster-based adhesive formulated to bond gypsum board to masonry, brick or concrete walls and for bonding decorative cornices to plaster surfaces and for reinforcing joints in cornices. These Premium Compounds have high bond strength and offers a long working time, mixes easily to a creamy, lump-free gauge, high strength, excellent adhesion to masonry, brick and concrete walls and decorative cornices. Easybond™ 60 Setting-Type Bonding Premium Compound Provides enhanced plaster adhesion to surfaces like gypsum plaster, cinder block, stone, drywall panels, and other similar materials. Fastbond Hightack Formula is easily applied by Sealant Gun for quick and instant bonding requirements. The Fastbond Hightack Formula has extremely high initial tack and can be applied as a universal adhesive for bonding many building materials such as: stone, concrete, glass, plasterboard, PU, PVC, hard plastics, enamel, ceramic, copper, lead, zinc, tin, aluminium, metals, alloys, stainless steel, HPL and cement fiber panels, wood and paints stems.

## 5. SEALANT

USG ME sealants are acrylic-based for use as sealants in fire-rated partitions, smoke barriers and sound-rated assemblies as acoustical barrier. The sealant exhibits exceptional structural integrity, forms a continuous flexible bead that resists collapse and flows into all but the most intricate joints, resists water penetration and offers excellent resistance to thermal shock. These sealants are low-flowing, forming a dense and continuous barrier against air and other gases. It provides excellent resistance to vibration and movement, making it ideal for joints in fire-rated assemblies that have little or no movement, they're produced with high fire rating and acoustical performances. Where the acoustical sealant which is a type of sealant that is specifically designed to reduce the transmission of sound through gaps or cracks in walls, ceilings, and floors. It is often used in construction and renovation projects to improve the acoustics of a space and reduce noise pollution.

## 6. ACCESSORIES

USG Middle East offers a full range of accessories for the project's builders. The accessories range of varieties from jointing tapes for interior and exterior use that add strength and crack resistance for smooth concealment at flat joints and inside corners, to the durable beads and trims that installs easily by screwing, nailing or tapping to steel or wood framing. Our corner beads and trims protect external corners, angles and panel intersections in drywall construction. It is concealed with our joint compounds, delivering a smooth finished surface and even that protects corners from impact.

## 7. ACCESS PANELS

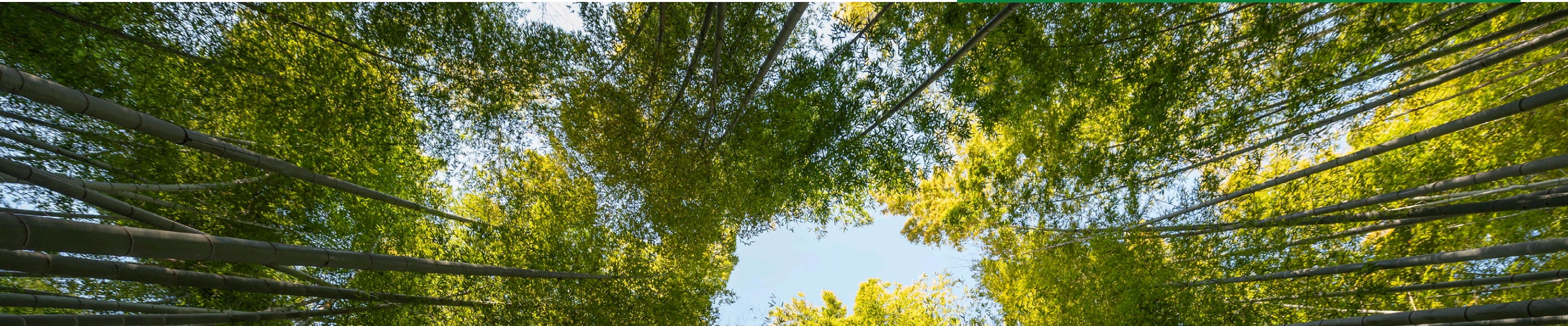
Offering wide range of access panels and doors. For wet areas, USG Middle East offers moisture- and mold-resistant access doors and plumbing accessories with plasterboard inlay, circumferential rubber lip seal, hidden snap locks, and self-adjusting safety catch arms. These moisture resistance access panels are panels that are designed to prevent the ingress of moisture. They are often used in buildings where access is needed to areas that may be exposed to water or damp conditions, such as bathrooms or kitchens.

Smoke, air, and dust-tight requirements are met by USG ME Smoke Control and Acoustic Access Doors and Plumbing Accessories, includes an EPDM hollow chamber seal for installation on walls and ceilings. Where the smoke control access panels are panels that are designed to prevent the spread of smoke in the event of a fire. They are often used in buildings to provide access to areas that are part of a smoke control system, such as ducts or shafts. Smoke control access panels are an important component of a building's fire safety system, and are typically installed in ceiling or floor areas.



SUSTAINABLE SYSTEMS

COMPANY CERTIFICATION AND COMPLIANCE



1. GREEN MANUFACTURING

Flexible and scalable production options with quicker delivery time. Our regional manufacturing facilities reduce the supply chain costs, energy consumption and transportation. USG ME is an excellent source of ceiling solutions for the regional community helping the environment with lesser emissions and energy usage. We care about earth: we provide green and sustainable products.



2. ENVIRONMENTAL PRODUCT DECLARATION

The Environmental Product Declaration (EPD) relies on the assessment tool—following ISO series 14040—to provide information on a number of environmental impacts of a product over its life cycle. EPD’s are primarily intended to facilitate business transactions with clients who are focused on sustainable environmental practices. Since adhering to the ISO series 14040, we have improved our goals for sustainability and demonstrated our commitment to sound environmental practices and our customers.



3. GREENGUARD

GREENGUARD Certification Program is for Products that have scientifically been proven to meet many of the world’s most rigorous third-party chemical emissions standards, helping to improve indoor air quality. By choosing products with GREENGUARD Certification, you are creating a healthier indoor environment for your home, office, or institution and reducing chemical exposure. USG Middle East’s Ceiling Systems are certified as GREENGUARD Gold as per the UL 2818 – 2013 Gold Standard for Chemical Emissions for Building Materials, Finishes, and Furnishings.



4. ENVIRONMENTAL AIR QUALITY

USG ME’s ceiling panels do not contain asbestos, carcinogens, mutagens, or toxic substances. Our ceiling products are classified and certified to have low impact on indoor air quality. Even when installed in a fully furnished room with little fresh air, the concentration of VOCs and Formaldehyde are well below accepted standards.

1. ISO CERTIFICATION

ISO 9001:2015  
QUALITY MANAGEMENT SYSTEM



ISO 45001:2018  
OCCUPATIONAL HEALTH AND  
SAFETY MANAGEMENT SYSTEM



ISO 14001:2015  
ENVIRONMENTAL MANAGEMENT  
SYSTEM







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