



SOUND ABSORPTION BOARD

BUILD SOUND RATED ENVIRONMENTS AND LIVING SPACES WITH SOUND ABSORPTION BOARD FOR MULTI-INSTALLATIONS TO ACHIEVE EXCELLENT LIVING COMFORTS

The Next Generation Technological **GREEN** Product Designed to assist the Designers achieve Noise Comfort Level / Acoustic Comforts in the Modern Working and Living Environments



OFFICES for productivity and privacy / confidentiality & noise control



SEMINAR and **MEETING ROOMS**



AUDITORIUM / CONFERENCE CENTERS



HOTELS, Restaurants, Lobbies, Guest Rooms, Banquet Halls, Business Centers, Airport Lounges



EDUCATIONAL FACILITIES, Classrooms, Lecture Halls, Libraries and Examination Halls



HEALTH CARE FACILITIES, Waiting Areas, Examination Rooms



Music Rooms, Cinemas, Recording Studios and Home Theaters



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GOLDLINE® – SOUND ABSORPTION BOARD

GOLDLINE® SOUND BARRIER – Sound Absorption Board for AIRBORNE and IMPACT Sound Control is Polyester Fiber Board made from 100% Polyester Fibers with sound-absorbing power and thermal insulation character. It is a very fine quality Next Generation Technological **GREEN** Product Designed to assist the Designers achieve excellent Noise Control Levels / Acoustic Comforts and Thermal Insulation

■ Characteristics of SOUND ABSORPTION BOARD

100% Polyester - Highly Compressed – Needle Punched

Medium Density Acoustic Board

Easy Installation

Excellent Acoustic Performance

Sound Reverberation Control / Noise Reduction

GREEN PRODUCT– Environment Friendly and Health Wise. Non - Irritant, Non

Allergenic, Fire Rated,

SAVES COST– Performs as High Rated Sound and Thermal Insulation

Can be installed in any Gypsum Board Wall Partition System (Single or Double Sides)

Safe, easy for handling and installing

Excellent in tensile strength and coherence

100% recycling and incineration environmentally friendly

Excellent in drainage and safe shape character

No poisonous factors to human body during the lifetime.

No poisonous gas emission in combustion

Curved surface works and circle pillar installing is possible with easy

(1) Environment friendly and harmless to human body

Removing harmful environment elements as substitute materials for plaster board, glass fiber panel, there are no weathering and no dust happening like scattering.

(2) Soundproof, Thermal Insulation, Softness and Light Weight

Having tensile strength and softness simultaneously consisting of three-dimensional network through the self-fusion of cellulose (polyester), having soundproof, thermal insulation and light weight with having pores connected inside.

(3) Burning and humidity safety

The low melting point ingredients of polyester melting in a low temperature in a fire Prevents the progress of flames with covering flames and the poisonous gas doesn't happen in combustion. It is a flame retardant material.

(4) Convenient and economical installation

The convenience of execution is excellent because it is cut off by cutter and flexible, installation period can be reduced because the finish progress of work can be removed, and reduction of material price and installation price can be made easy through direct applying to the cementitious wall, concrete slab, building sound isolation wall and ceiling systems, sandwich panels, acoustic underlayment for hard & soft floors and Multi Installations for Fine Interior Design and Finishing

(5) The excellence in comparison with the other materials

Having soundproof, thermal insulation, softness, light weight, difficulty of combustion, safety of humidity and safety of environment simultaneously in comparison with Styrofoam, MDF, veneer board, plaster board and others. Suitable for Noise reductions in life environment and because of special characteristic of finishing materials with 45% soundproof rate simultaneously it is the suitable product for multi interior décor applications

- Energy: With excellent thermal insulation as certified, thermal efficiency is excellent. Because the safety of humidity being native to polyester fiber is excellent, let it not only drain (humidity rate 0.07%) but also maintain original intensity after the drainage.
- Free Cutting: With harmlessness to human health as perfect (100%) polyester and the easiness of dealing and handling, the term of works is reduced and various shapes and curved surface works can be performed.
- Sound Absorption: Excellent Airborne and Impact soundproofing as certified.
- Free Painting: With surface works, painting, wall paper, wall coverings, digitally printed skins and various fabrics finishing touches are performed

(6) The use of products

- The keeping warmth of light weight partition heartwood, sound absorption insulating material (indoors finishing touches material) acoustic underlayment for hard and soft floors, ceiling, isolation wall systems and multi-applications
- Construction, industrial heat equipments (tank, duct, electronic products etc.) keeping warmth sound absorption and insulating materials
- insulation of sound in the machine room, sound arresting equipment materials

(7) The comparison of a property of matter

(1) The comparison of a property of matter in interior finishing touches materials.

Item	Sound Barrier	MDF	Plaster board	Plywood	Mineral Fibers
Use	intercept the heat/soundproof/finishing touches	finishing touches materials	finishing touches materials	finishing touches materials	soundproof material
The quality of the material	100% polyester fiber	wood fiber (Wood fiber)	calcium sulphate bichloride	veneer	minerals wool
Method of manufacture	polyester fiber needle punched	heat pressing molding of wood fiber, wood material, with plastics adhesives	molding between paperboards after the plasticity of plaster material	attachment of veneer board grain by the type crossing at right angles	molding mineral wool with plate
Soundproof ratio (NRC)	0.45	-	0.06	0.15	0.42
Thermal conductivity (Kcal/mh°C)	0.029~0.037	-	0.14	-	0.055
Density (kg/m ³)	237	400~800	600~900	400~650	500
Thickness (mm)	9~12	3~30	9.5~1.5	25~100	10~100
Damp proof	no influence	Fragile	fragile	recovery of the original form	fragile
Softness	Soft	Hard to transform	Hard to transform	Hard to transform	Hard to transform
The difficulty of burning	difficulty of burning	burning	difficulty of burning	burning	difficulty of burning

(8) Sound absorption character

(1) Sound absorption character in various installations of Sound Absorption Board

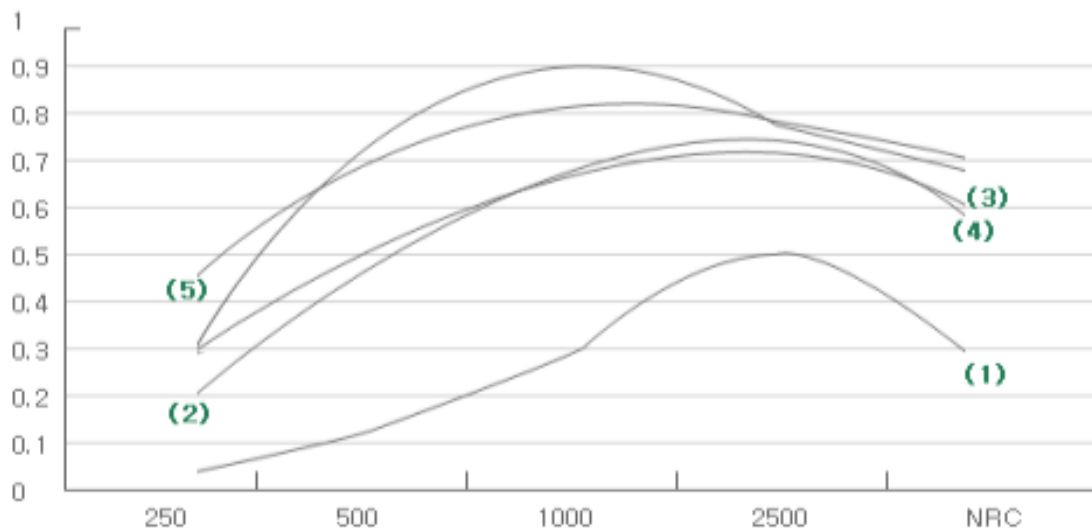
- The measurement results of sound absorption character of Sound Barrier (reverberation room method sound absorption efficiency, %)
- If there is an air-gap in the installation of Sound Barrier, the function of sound absorption becomes better.
- When powerful sound absorption character is needed, Polyester is the BEST.

[Analysis table]

Sound Barrier is only related with SB9T column, but others of the line express the composite of Sound Barrier.

Frequency	SB9T	SB9T+Air50	20T	20T+Air50	45K25T	45K50T
250	0.21	0.271	0.14	0.276	0.278	0.451
500	0.37	0.467	0.454	0.719	0.528	0.738
1000	0.52	0.709	0.744	0.893	0.687	0.831
2500	0.37	0.733	0.784	0.781	0.718	0.789
NRC	0.37	0.454	0.531	0.667	0.553	0.702

[Function table of sound absorption materials]



- (1) AT9T

 (2) AT9T + Air50 20T

 (3) 20T + Air50

 (4) 45K25T

 (5) 45K50T

(1) Thermal insulation charter of Sound Absorption Board of 9mm Thickness

Test items	Unit	Result	
Thermal conductivity (The mean temperature 20 +/- 2 °C)	W/m.K	0.033	KSL9016-95 heat flow meter

(2) Fire Ratings

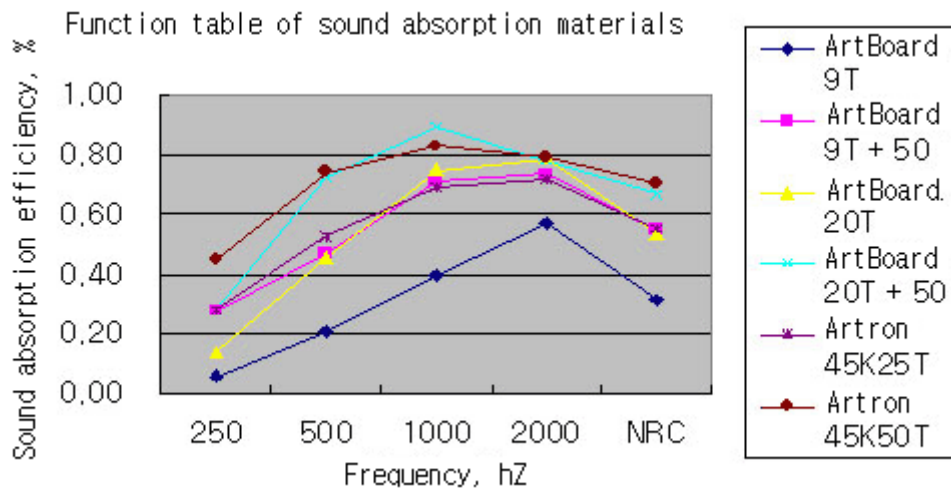
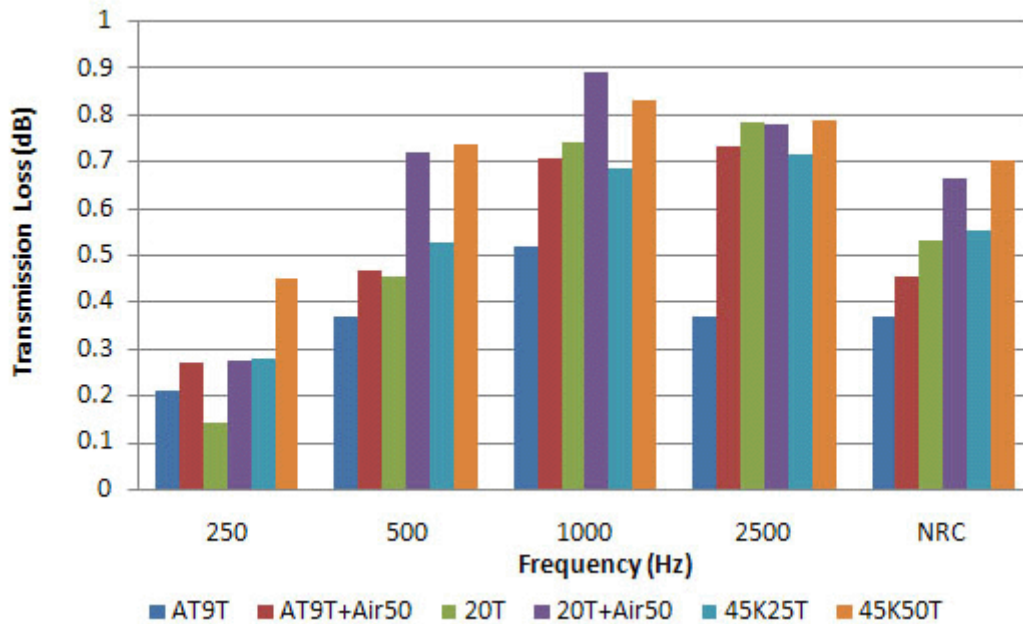
- Measurement methods : soundproofing walls (The Fire Services Act Enforcement Ordinance)
- Measurement place : RTI (Testing & Research Institute)

Classification	Standard (Interior decoration material)	Result			Reference
		0.21	0.39	0.57	
Remaining flame time (sec)	within 10	0	0	0	Judgment: success
Perfect combustion time (sec)	within 30	0	0	0	
Carbonization dimensions(cm ²)	within 50	32.4	34.5	37.4	
Carbonization length (cm)	within 20	6.3	6.4	6.6	

(3) Specifications

Materials	Polyester
Standard	gT
Density (K)	180~220
Thickness (mm)	9(5, 8, 12, 15)
Size (mm*mm)	1200 * 2400 & 2700
Color	WHITE
Construction	Attachment of adhesives and format, Fabrics processing, V-cutting possible

(4) Sound absorption character of Sound Absorption Board / Polyester



(5) Thermal Insulation charter of Sound Absorption Board

[The insulation charter of Sound Absorption Board]

Test items	Unit	Result	Test method
Thermal conductivity (the mean temperature 20 +/- 2 °C)	W/m.K	0.033	KSL 9016-95 heat flow meter

(6) Sound Absorption Board – Fire Test

- Measurement methods : soundproofing walls (The Fire Services Act Enforcement Ordinance)
- Measurement place : RTI (Testing & Research Institute)

Classification	Standard (Interior decoration material)	Result			Reference
		#1	#2	#3	
Remaining flame time (sec)	within 10	0	0	0	Judgment : Success
Perfect combustion time (sec)	within 30	0	0	0	
Carbonization dimensions(cm ²)	within 50	32.4	34.5	37.4	
Carbonization (cm)	within 20	6.3	6.4	6.6	

[The production SPEC of Sound Absorption Board]

Standard	9
Density, K	237
Thickness, mm	9 & 12
Size (mm * mm)	1200 * 2400 & 2700

Product Specifications:

- 100% Polyester - Highly Compressed
- Medium Density Acoustic Board
- 9 & 12mm Thickness (White Color)
- Sheet Size 120 x 270cm
- Easy Installation
- Excellent Acoustic Performance
- Achieve up to STC 81, depending upon the wall system design
- Sound Reverberation Control / Noise Reduction - NRC 0.70 (Approx. 70%) once directly exposed to Sound Sources
- **GREEN** PRODUCT– Environment Friendly and Health Wise
- Non - Irritant, Non Allergenic, Fire Rated,
- SAVES COST– Performs as High Rated Sound and Thermal Insulation
- Can be installed in any Wall Partition System (Single or Double Sides) & Interior Applications
- Can be installed in the Doors to Control Sound Transmission



Hotels & Residential Towers

Sound Absorption Board can be used for Hotels & Apartment Buildings with Inter-tenancy Partition Walls (walls between tenants) to Control Sound Transmission or Airborne Sound from One Room to Another Room



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