

AKDOLAM

LAMINATED
STONE
PANELS

THE LIGHTEST NATURAL STONE PANEL

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AKDOLAM



AKDOLAM is an innovative solution for creating dramatic, large format natural stone installations in an efficient manner. Using advanced technology, stone slabs are cut into incredibly thin sheets and laminated onto lightweight materials. The resulting product offers a more sustainable, custom approach to design, while maintaining a lower price point.

BENEFITS OF AKDOLAM



EXTRA-LARGE PANELS

Large format sizes available up to 180x300 cm



VARIETY OF FINISHES

Various stone surface finishes such as polished, honed, bush-hammered or sandblasted.



LIGHTWEIGHT

From 16 kg/m²



REDUCES INSTALLATION TIME

Installation takes 50% less time.



HIGH RESISTANCE TO MOISTURE

High resistance to moisture.



HIGH IMPACT RESISTANCE

High load-bearing capabilities.



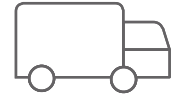
SUSTAINABLE

Energy savings due to reduced transportation and installation times.




TOTALLY CUSTOMIZABLE

Choose your stone and backing; custom sizes and patterns available upon request.




EASILY TRANSPORTED


Full containers of the material can be shipped, reducing transportation costs.




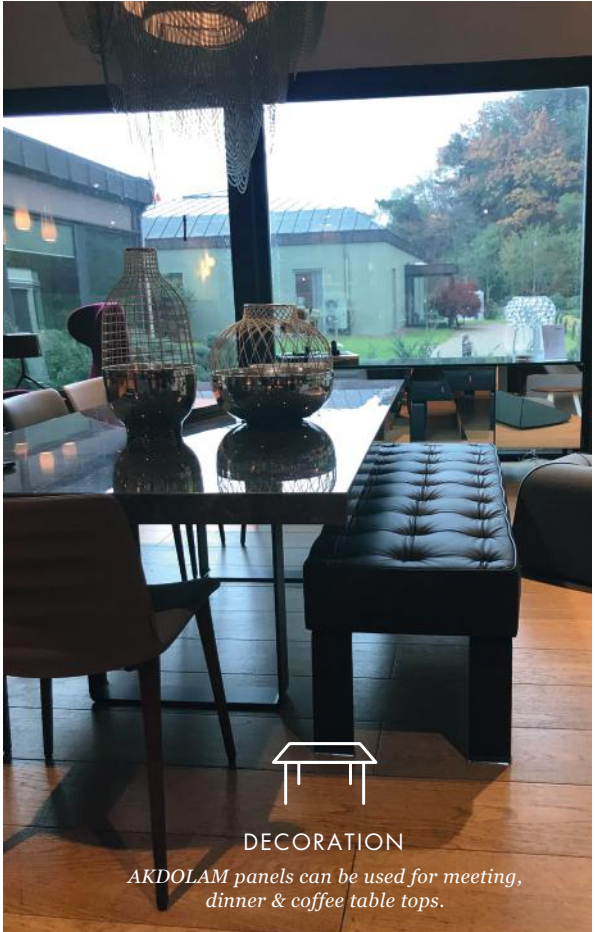
AREAS OF USE


AKDOLAM can be utilized in the following applications: Surface coverings, aerospace manufacturing, furniture industry, decorative products, ship manufacturing, soffits and spherical surfaces, automotive industry.


INTERIOR
AKDOLAM is ideal interior wall claddings


WALL / FLOOR
AKDOLAM is ideal for wall, floor and ceiling applications


WET AREAS
AKDOLAM can be used in wet areas like showers.




DECORATION
AKDOLAM panels can be used for meeting, dinner & coffee table tops.

COLOR OPTIONS

Customize your AKDOLAM with our large selection of premium natural stones.

Astra White

Athens Gray

Brown Queen

Calacatta

Calacatta Helena

Carrara

Castano Brown

Crema Alexandra

Dark Olive

Emperador Dark

Emperador Light

Ephesus Dune

Granville Beige

Lilac

Marmara Equator

Maya White

New Luget

Oro Gray

Oro White

Savana Gray

Silver Gray

Silver Stone

Silver Wood

Tulip Black

Vega Light

BACKING OPTIONS

There are five backing materials available; each offering unique benefits, making them appropriate for use in different applications:

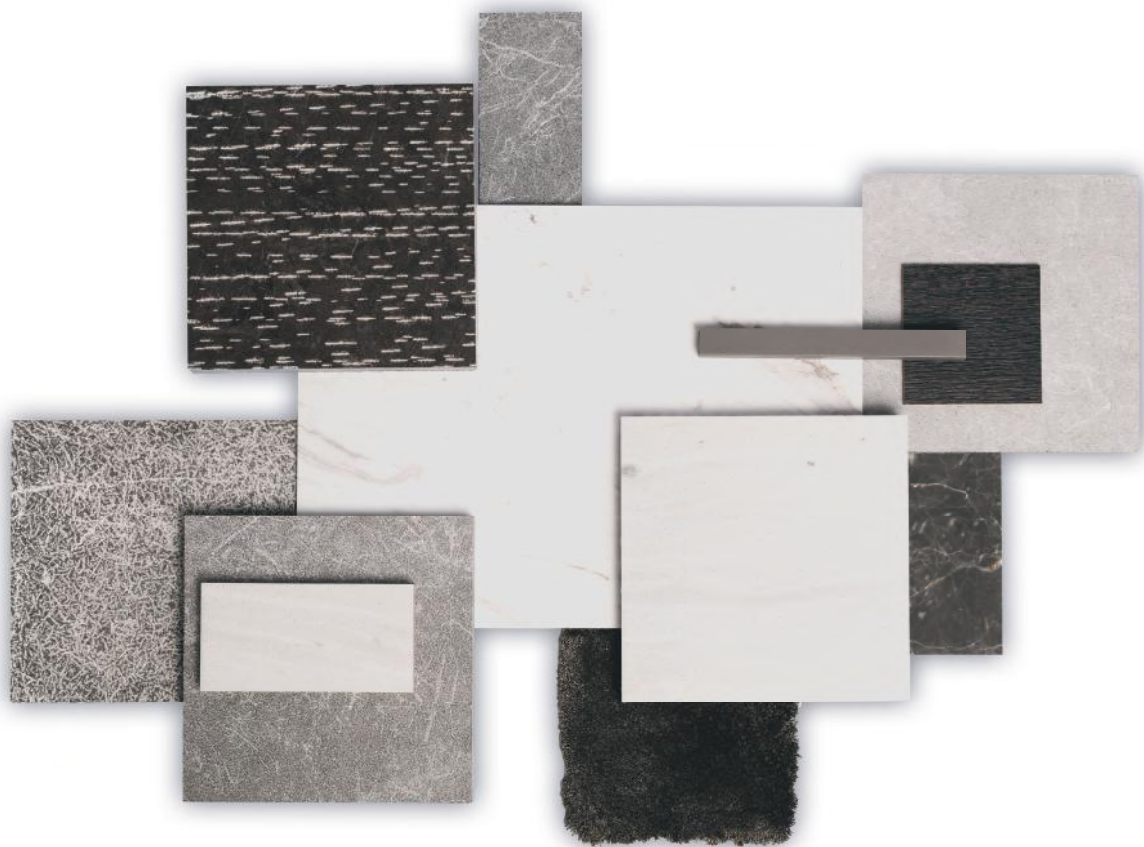
AL Aluminium Honeycomb

FG 3D Fiberglass

GL Glass

PR Porcelain

FC Fiber Composite



Lighter, Stronger, Thinner, Environmentally Friendly and Still Natural...

AKDOLAM - AL

ALUMINIUM HONEYCOMB

Aluminium honeycomb w/fiber skin*

Aluminium honeycomb w/aluminium skin*

- Suitable for vertical (15+5 mm) interior & vertical (20+5 mm) exterior and horizontal interior applications
- 30% of the weight of 2 cm marble panel
- 60 times more impact resistance vs 2 cm marble panel
- 50% reduced installation time
- Available in various surface finishes (polished, honed, brushed, sandblasted)
- Available in extra-large panel sizes due to light weight
- Suitable for use in wet areas

Most Common Applications:

- Building Construction Industry
- Yacht Building Industry (Special Honeycomb Material)
- Aerospace Industry
- Furniture industry

Installation: Adhesive, mechanical anchoring.

* Silkar reserves the right to supply with one of them depending on the project.

* It is recommended to close the sides with an appropriate filler for floor and wet area applications.





160 Dikeman Street, Brooklyn - New York

AKDOLAM Aluminium Honeycomb (AL) w/Aluminium Skin Technical Information

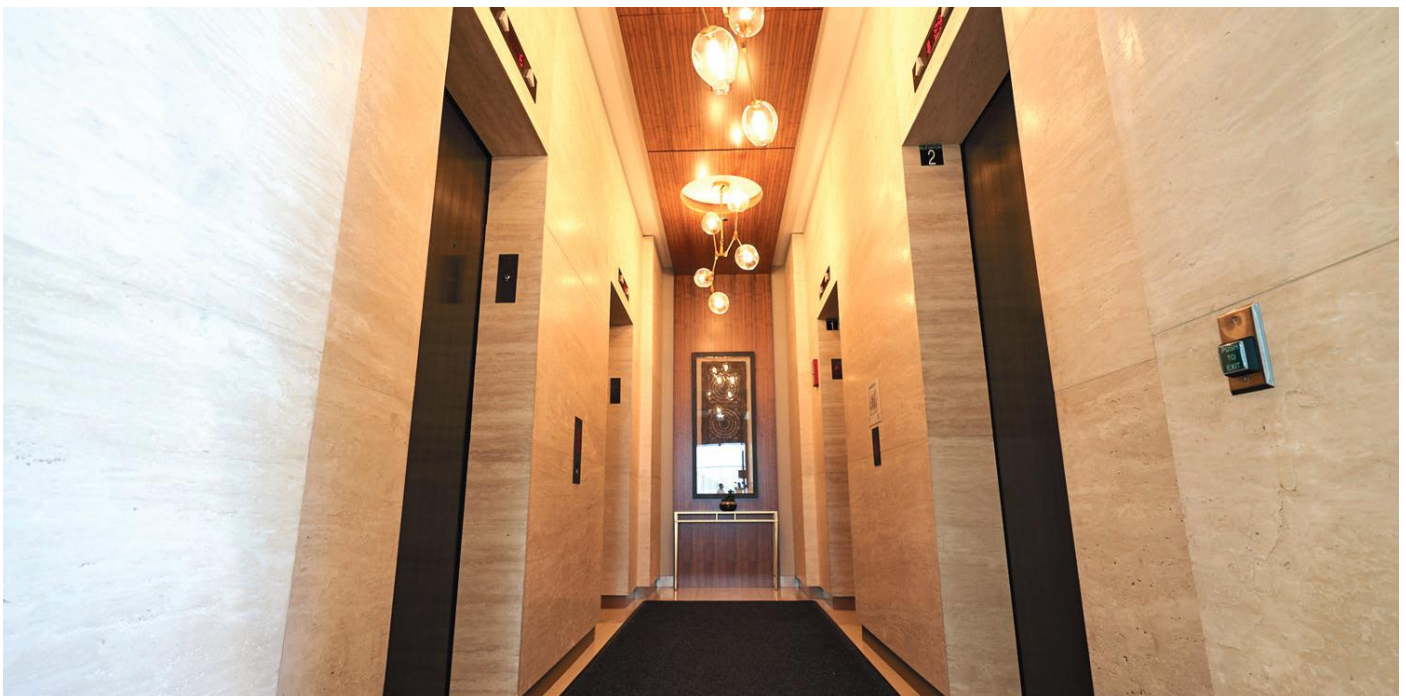
	AKDOLAM AL w/Aluminium Skin		Test Standards
Max Panel Dimension (mm)	1800 x 3000	1800 x 3000	-
Standard Slab Size (mm)	1500 x 2500	1500 x 2500	-
Panel Thickness (mm)	20	25	-
Outer Surface Natural Stone Thickness (mm)	5	5	-
Core Panel Thickness (mm)	15	20	-
Weight (kg/m ²)	18	19	-
Performance Properties	Not Flexible	Not Flexible	-

Place of Use	Interiors (Panel Thickness: 20mm) - Bathroom floor & wall - Residential floor & wall - Commercial wall Exteriors (Panel Thickness: 25mm) - Façade Applications	-
Finish	Polished / Honed / Brushed/ Sandblasted	-
Installation System	Mechanical Fixing & Adhesive	-

Fire Test for Exterior Wall Assemblies	Pass	Pass	NFPA 285
Reaction to Fire	B-s1, d0	B-s1, d0	EN 13501
Determination of tensile adhesion Strength for Initial Adhesive (N/mm ²)	0.8	0.8	EN 1348
Determination of tensile adhesion Strength for Heat Ageing Adhesive (N/mm ²)	0.8	0.8	EN 1348
Determination of tensile adhesion Strength for Freeze-thaw Adhesive (N/mm ²)	0.7	0.7	EN 1348
Resistance to Wind Load (0-4 kPa), Displacement (mm)	Permanent Deformation: 3.25 Displacement: 0.34	Permanent Deformation: 3.25 Displacement: 0.34	EN 12179
Frost Resistance (MPa)	4.17 ± 0.31	4.17 ± 0.31	EN 12371
Resistance to Ageing by SO ₂ Action in the Presence of Humidity%	0.75 ± 0.25	0.75 ± 0.25	EN 13919
Resistance to Ageing by Thermal Shock (MPa)	Average mass loss: 0.02 % Flexural Strength Difference: -1.53	Average mass loss: 0.02 % Flexural Strength Difference: -1.53	EN 14066
Resistance to Ageing by Salt Mist %	0.24±0.05	0.24±0.05	EN 14147
Flexural Strength (MPa)	28.76	28.76	EN 12372
Rupture Energy (Joule)	4.2± 0.16	4.2± 0.16	EN 14158
Impact Resistance	E 5 (950 mm; 475 J)	E 5 (950 mm; 475 J)	EN 14019

AKDOLAM Aluminium Honeycomb (AL) w/Fiber Skin Technical Information

	AKDOLAM AL w/Fiber Skin	Test Standards
Max Panel Dimension (mm)	1800 x 3000	-
Standard Slab Size (mm)	1500 x 2500	-
Panel Thickness (mm)	20	-
Outer Surface Natural Stone Thickness (mm)	5	-
Core Panel Thickness	15	-
Weight (kg/m ²)	16	-
Performance Properties	Not Flexible	-
Place of Use	Interiors - Bathroom floor & wall - Residential floor & wall - Commercial wall	-
Finish	Polished / Honed / Brushed / Sandblasted	-
Installation System	Mechanical Adhesion (Silicone / Epoxy)	-
Reaction to fire	B-s1, d0	EN 13501
Reaction to fire	Class A	ASTM E 84
Determination of Tensile Adhesion Strength for Adhesive (N/mm ²)	>1	EN 12004
Impact Resistance	Class 1 – No Damage	ISO 7892



AKDOLAM - FG

3D FIBERGLASS

- Interior Cladding (walls only)
- 30 % of the weight of 2 cm marble panel
- 60 times more impact resistance vs 2 cm marble panel
- 50% reduced installation time
- Available in various surface finishes (polished, honed, brushed, sandblasted)
- Available in extra-large panel sizes due to light weight
- Suitable for use in wet areas (shower walls)

Most Common Applications:

- Building Construction Industry
- Aerospace Industry
- Furniture industry

Installation: Two component epoxy based matching colored adhesive or polyurethane based strong silicone adhesive (spot application) adhesive to match the color of the stone



AKDOLAM 3D Fiberglass (FG) Technical Information

	AKDOLAM FG	Test Standards
Max Panel Dimension (mm)	1250 x 3000	-
Standard Slab Size (mm)	1250 x 2500	-
Panel Thickness (mm)	20	-
Outer Surface Natural Stone Thickness (mm)	5	-
Core Panel Thickness	15	-
Weight (kg/m ²)	16	-
Performance Properties	Flexible	-
Place of Use	Interiors - Bathroom wall Residential wall - Commercial wall Furniture	-
Finish	Polished / Honed / Brushed	-
Installation System	Adhesion (Silicone / Epoxy)	-
Reaction to Fire	B-s1, d0	EN 13501
Adhesion Tensile Strength (N/mm ²) Shear test	0.7	EN 12004
Adhesion Tensile Strength (N/mm ²) After Thermal Cycle	0.5	EN 12004
Adhesion Tensile Strength (N/mm ²)	0.4	EN 12004

AKDOLAM 3D Fiberglass (FG) Technical Information

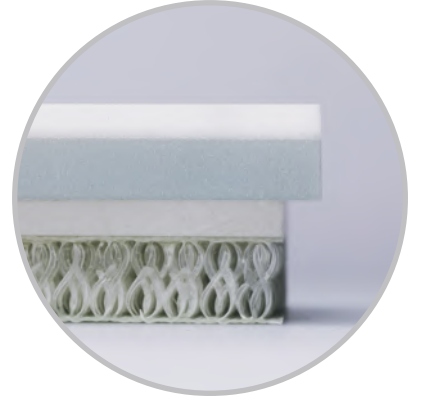
	AKDOLAM FG	Test Standards
Max Panel Dimension (mm)	1250 x 2500	-
Max Cut to Size Panel (mm)	1000 x 2000	Contact the manufacturer
Panel Thickness (mm)	10	-
Outer Surface Natural Stone Thickness (mm)	5	-
Core Panel Thickness	5	-
Weight (kg/m ²)	15	-
Performance Properties	Flexible	-
Place of Use	Interiors - Bathroom wall Residential wall - Commercial wall Furniture	-
Finish	Polished / Honed / Brushed	-
Installation System	Adhesion (Silicone / Epoxy)	-
Reaction to Fire	B-s1, d0	EN 13501
Adhesion Tensile Strength (N/mm ²) Shear Test	0.7	EN 12004
Adhesion Tensile Strength (N/mm ²) After Thermal Cycle	0.5	EN 12004
Adhesion Tensile Strength (N/mm ²)	0.4	EN 12004

AKDOLAM - GL

GLASS

- Suitable for Interior applications
- Suitable for backlit applications
- Translucent when used with white marbles and onyx
- Suitable for use in wet areas (shower separations)
- Increased durability compared to only glass or only stone applications
- Transforms non-translucent stones into translucent stone based on stone formation
- Available in various surface finishes (polished, honed)

Most Common Applications:
Separation Walls, Shower Panels, Desks, Tables





AKDOLAM Glass (GL) Technical Information

	AKDOLAM GL	Test Standards
Max Panel Dimension (mm)	1800 x 3000	-
Standard Slab Size (mm)	1500 x 2500	-
Panel Thickness (mm)*	15	-
Outer Surface Natural Stone Thickness (mm)	5	-
Core Panel Thickness	10	-
Weight (kg/m ²)	38	-
Performance Properties	Not Flexible	-
Place of Use	Interiors* - Bathroom wall - Residential wall - Commercial wall	-
Finish	Polished / Honed / Brushed	-
Installation System	Mechanical	-
Reaction to Fire	N/A**	EN 13501
Determination of Tensile Adhesion Strength for Adhesive (N/mm ²)	>1,2	EN 12004
Determination of Heat Ageing Adhesive Strength for Adhesive (N/mm ²)	>1,4	EN 12004
Impact Resistance	Class 1 – No Damage	ISO 7892
Pendulum Test	1(B)1	EN 12600

* AKDOLAM Glass (GL) may not be suitable for National Class 0 and 1 type of locations according to Building Regulations Part B2

** N/A: Not applicable

AKDOLAM - PR

PORCELAIN

- Interior Flooring and Walls
- 50 % of the weight of 2 cm marble panel
- Available in various surface finishes (polished, honed, brushed, sandblasted, bush hammered)
- Suitable for use in wet areas (shower floors)

Most Common Applications:
Building Construction Industry





Ritz Carlton, Chicago

AKDOLAM Porcelain (PR) Technical Information

	AKDOLAM PR		Test Standards
Max Panel Dimension (mm)	580 x 1160	1180 x 2350	-
Standard Slab Size (mm)	<= 580 x 1160	> 580 x 1160	-
Panel Thickness (mm)	13	15	-
Outer Surface Natural Stone Thickness (mm)	5	5	-
Core Panel Thickness	8	10	-
Weight (kg/m ²)	34	39	-
Performance Properties	Not Flexible	Not Flexible	-
Place of Use	Interiors - Bathroom floor & wall - Residential floor & wall - Commercial floor & wall		-
Finish	Polished / Honed / Brushed		-
Installation System	Adhesion (Cement / Silicone / Epoxy)		-
Reaction to Fire	B-s1, d0		EN 13501
Impact Resistance	Class 1 – No Damage		ISO 7892
Determination of Tensile Adhesion Strength for Adhesives (N/mm ²)	1.5		EN 12004

AKDOLAM - FC

FIBER COMPOSITE

- Furniture (dining table, coffee table, bench, shelf) and interior cladding (walls only).
- 40 % of the weight of 2 cm marble panel.
- 60 times more impact resistance vs 2 cm marble panel.
- Available in various surface finishes (polished, honed, brushed, sandblasted).
- 50 % reduced installation time.
- Available in extra-large panel sizes due to light weight, maximum size is 1800x3000 mm.
- Suitable for use in wet areas (shower walls).



Most Common Applications:

- Furniture Industry
- Building Construction Industry
- Aerospace Industry

Installation: Two component epoxy based matching colored adhesive or polyurethane based strong silicone adhesive (spot application) adhesive.

In our standard process, the back-panel color is light gray (Ral 7035). The minimum order quantity for different color of composite is 500 m².

In furniture applications, 5 + 5 mm Fiber Composite panel should be used by gluing 18 mm MDF or Marine Wood underneath.





AKDOLAM Fiber Composite (FC) Technical Information

	AKDOLAM FC	Test Standards
Max Panel Dimension (mm)	1800 x 3000	-
Standard Slab Size (mm)	1500 x 2500	-
Panel Thickness (mm)	10	-
Outer Surface Natural Stone Thickness (mm)	5	-
Core Panel Thickness	5	-
Weight (kg/m ²)	22	-
Performance Properties	Flexible	-
Place of Use	Interiors - Bathroom wall - Residential wall - Commercial wall Furniture	-
Finish	Polished / Honed / Brushed	-
Installation System	Adhesion (Cement / Silicone / Epoxy)	-
Impact Resistance	Class 1 – No Damage	ISO 7892
Determination of Tensile Adhesion Strength for Adhesives (N/mm ²)	0.85	EN 12004

TECHNICAL INFORMATION

AKDOLAM	Aluminium Honeycomb	Aluminium Honeycomb	Fiberskin Honeycomb	3D Fiberglass
Max Panel Dimensions (mm)	1800 x 3000	1800 x 3000	1250 x 3000	1250 x 3000
Standard Slab Size (mm)	1500 x 2500	1500 x 2500	1250 x 2500	1250 x 2500
Panel Thickness (mm) **	20	25	20	20
Outer Surface Natural Stone Thickness (mm)	5	5	5	5
Core Panel Thickness (mm)	15	20	15	15
Installation System	Mechanical / Adhesion	Mechanical / Adhesion	Adhesion	Adhesion
Place of Use	Interiors	Interior / Façade/ Exterior	Interiors	Interiors
Weight (kg/m ²)	17	18	16	16
Performance Properties	Not Flexible	Not Flexible	Not Flexible	Flexible
EN13501 Reactions to Fire	B-s1,d0	B-s1,d0	B-s1,d0	B-s1,d0
ASTM E84 Reactions to Fire	-	-	Class A	-
NFPA285 Reactions to Fire	-	Pass	-	-
EN12179 Resistance to Wind Loads, Displacement (0-4kPa) (mm)	Permanent Deformation: 3,25 Displacement: 0,34	-	-	-
EN12371 Determination of Frost Resistance -48 Cycles (MPa)	4,17±0,31	-	-	-
EN13919 Determination of Resistance to Ageing by SO ₂ Action in the Presence of Humidity %	0,75±0,25	-	-	-
EN14066 Determination of Resistance to Ageing by Thermal Shock (MPa)	Average Mass Loss: 0,02% Flexural Strength Difference: -1,53	-	-	-
EN14158 Determination of Rupture Energy (joule)	4,2±0,16	-	-	-
EN14147 Determination of Resistance to Aging by Salt Mist %	0,24±0,05	-	-	-
EN12372 Flexural Strength (MPa)	28,76	-	-	-
ASTM C297 Tensile Strength	-	-	-	-
ASTM C99 Dry Condition Modulus of Rupture	-	-	-	-
ASTM C99 Wet Condition Modulus of Rupture	-	-	-	-
ASTM D2247 Water Resistance	-	-	-	-
ASTM C482 Bond Strength	-	-	-	-
ASTME 330 Resistance to Safety Load	-	± 9000 Pa	-	-
AAMA 501.5-07 Thermal Cycling	-	High Temperature 60°C Low Temperature - 40°C	-	-
ISO7892 Impact resistance tests	Class 1- No Damage	Class 1- No Damage	Class 1- No Damage	-
Determination of tensile adhesion Strength for Initial Adhesive (N/mm ²)	0,8	0,8	>1	0,7
Determination of tensile adhesion Strength for Heat Ageing Adhesive (N/mm ²)	0,8	0,8	-	0,5
Determination of tensile adhesion Strength for Freeze-thaw Adhesive (N/mm ²)	0,7	0,7	-	0,4
Pendulum Test -EN 12600	-	-	-	-

* Natural stone column is for Dark Olive stone.

** Panel thickness vary according to the customer demands and suitability of use.

*** Maximum size of the panel will be 100x200 cm for calcareous stone types such as Dark Olive.

	3D Fiberglass	Glass	Fiber Composite	Porcelain	Porcelain	Natural Stone*
	1250 x 2500	1800 x 3000	1500 x 2500	580 x 1160	1180 x 2360	1800 x 3000
	1500 x 2500	1500 x 2500	1500 x 2500	<=580 x 1160	>580 x 1160	-
	10	15	10	13	15	-
	5	5	5	5	5	20
	5	10	5	8	10	-
	Adhesion	Mechanical	Adhesion	Adhesion	Adhesion	Mechanical / Adhesion
	Interiors	Interiors	Furniture Industry, Interiors	Interiors / Floor / Wall	Interiors / Floor / Wall	Interiors/ Exteriors / Floor / Wall / Claddings
	15	38	22	34	39	56
	Flexible	Not Flexible	Flexible	Not Flexible	Not Flexible	Not Flexible
	B-s1,d0	-	-	B-s1,d0	B-s1,d0	A1
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	13,9
	-	-	-	-	-	-
	-	-	-	-	-	Average Mass Loss: 0,02%
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	14,3
	-	-	-	242 psi	242 psi	-
	-	-	-	4240 psi	4240 psi	-
	-	-	-	3990 psi	3990 psi	-
	-	-	-	No deleterious effects	No deleterious effects	-
	-	-	-	269 psi	269 psi	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	Class 1- No Damage	Class 1- No Damage	-	-	-
	0,7	>1,2	0,85	1,5	1,5	0,9-1,5
	0,5	>1,4	-	-	-	-
	0,4	-	-	-	-	-
	-	1 (B)1	-	-	-	-



Silkar Madencilik San. ve Tic. A.Ş.

Merkez/Headquarter and Info Center

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Fax +90 212 576 77 88
info@akdo.com.tr

Üretim Tesisleri/Production Facilities

Marble Factory - Bilecik, Turkey
Mosaic Factory - Bilecik, Turkey
Mosaic Factory - Shijiazhuang, China

UK Showroom

Turkish Trade Center (TTC)
26 St. Cross Street
London, EC1N 8UH, UK
Phone +44 20 7112 8525

AKDO Intertrade Inc.

AKDO Corporate

1435 State Street
Bridgeport, CT 06605
Phone 203.336.5199
Fax 203.336.0603

AKDO Pacific

3445 Arden Road
Hayward, CA 94545
Phone 510.785.2536
Fax 510.785.0895

AKDO Manhattan Showroom

22 West 21st Street
New York, NY 10010

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