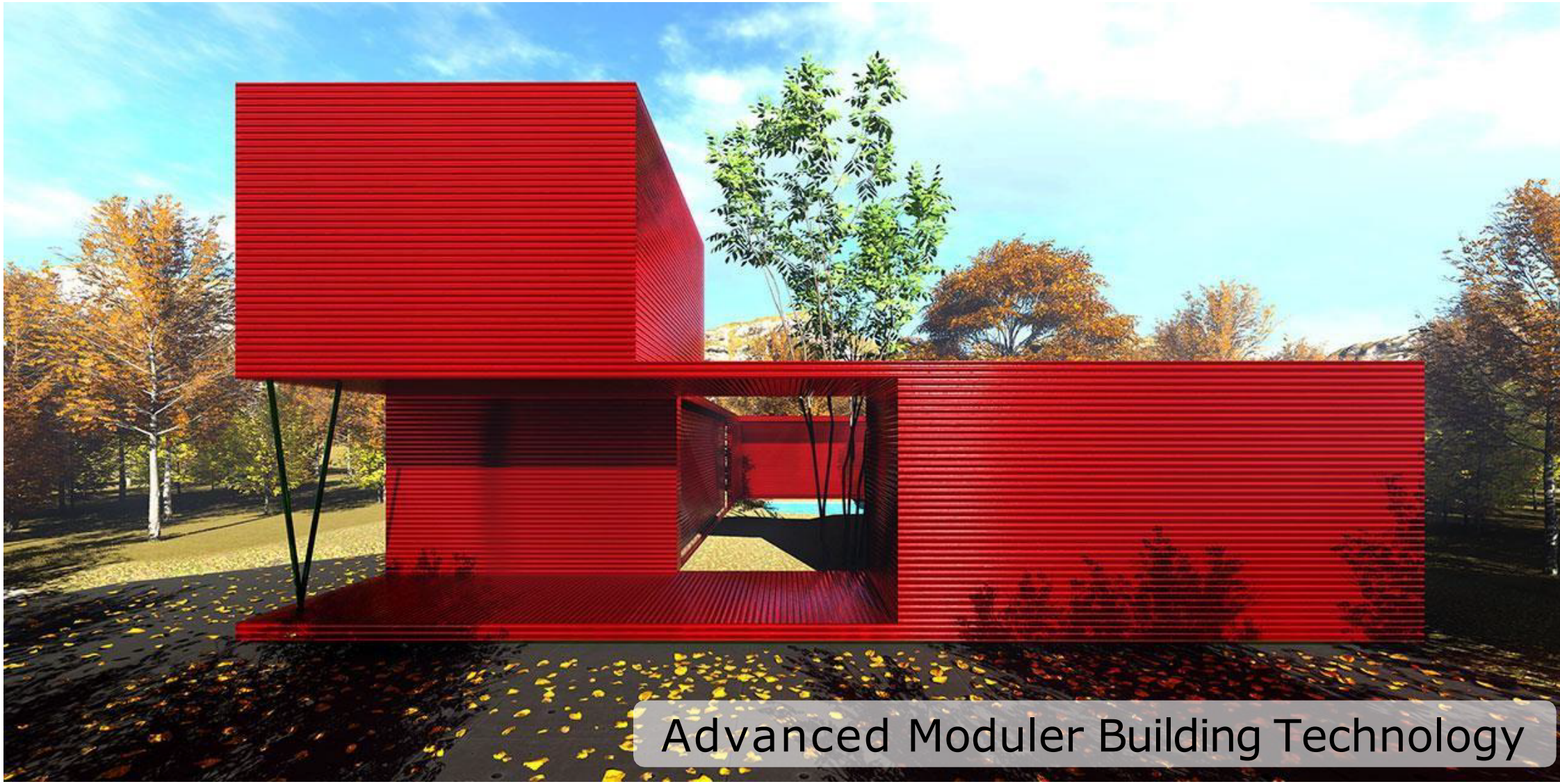
GLOBALTURQ

GLOBAL SOLUTION PARTNER

tasblock istanbul



Advanced Moduler Building Technology

www.globalturq.org

www.tasblockistanbul.com

HOMES
Homes
Townhouse
Custom House
Condominiums
Cottage/ Cabins

HOTELS

CONTAINER SYSTEMS
Living & Office Containers

HOUSING
Disaster Relief Housing
Social Housing

INFASTRUCTURE PRODUCTS
Water Tanks
Manhole Covers
Loophole Covers
Cesspools
Treatment Facilities
Electric And Natural Gas Boxes

SOCIAL & GOVERNMENT STRUCTURES
Schools
Health Centres
Wedding Halls
Fire Stations
Municipal Buildings
911 Call Centres
Police Stations
Religious Buildings
Animal Shelters
Outdoor Restrooms

INDUSTRIAL STRUCTURES
Factory Buildings
Warehouses
Cold Storage Units

COMMERCIAL BUILDINGS
Retail Stores
Restaurants & Cafes
Gas Stations
Kiosks
Sales Offices & Taxi Stations

LANDSCAPING PRODUCTS
Fencing
Decks
Tactile Pavings
Pavers
Landscaping Walls
Sound Barriers
Piers
Landscaping Furniture
Parking Barriers
Lighting Fixtures
Trash Containers

DEFENSE & SECURITY STRUCTURES
Security Cabins
Armored Security Cabins
Armored Patrol Stations
Armored Border Control Stations
Military Dormitories
Military Kitchens
Military Cafes

AGRICULTURAL STRUCTURES
Greenhouses
Barns
Poultry Farms
Mangers
Silos

CONSTRUCTION MATERIALS
Building Blocks
Building Facades

OVERVIEW

TASBLOCK has been a pioneer in developing next generation new technologies and ideas, leading advancements in the renewable composite products industry for over a decade, providing patented and patent pending innovative and state of the art solutions for a variety of industries, with main focus on manufacturing and supplying of construction related renewable composite products.

TASBLOCK has been rapidly expanding its multinational presence by setting its sights on new projects and lucrative opportunities to harvest the ever-growing affordable housing and other construction demand in those regions with its uniquely designed product solutions.

COMPETETIVE EDGE

TECHNOLOGY

There are currently many different types of generally accepted synthetic composite materials and industrial processes accepted and used by the aerospace, marine and other different industries.

TASBLOCK differentiates itself through its newly developed patented and patent pending innovative proprietary process, which utilizes a unique fiber composite block and assembly system, as well as other products made from fiber composite materials and other construction related products, in which the parts of composite houses are connected to each other by means of an interlock system, for the manufacturing and construction of composite houses and other building structures. Through the use of the unique interlock system, construction solutions become limitless and adaption of our products allows the use of any architectural design which can easily and entirely replace the need for traditional building materials.

TECHNOLOGY

TARGETS

Eliminate fossil fuel usage

Being Carbon Neutral

Use low carbon sources

Solar, wind, energy storage, smart grids, and clean transport

Become 100 % renewable

Commitment to environmental preservation

STRATEGY

TECHNOLOGY

Our R&D activities are ultimately geared to developing innovative, sustainable solutions

Guaranteeing energy supplies that are also economically sustainable

Promoting the efficient utilization of energy, especially in building technology

Using advanced automation and digitalization technologies Company's portfolio of intellectual property (IP) rights by obtaining and holding patents

Partnerships with Universities and Research Institutions Testing and certification procedures on global level with high credential and reputable institutions

Collaborating with start-ups for fresh projects

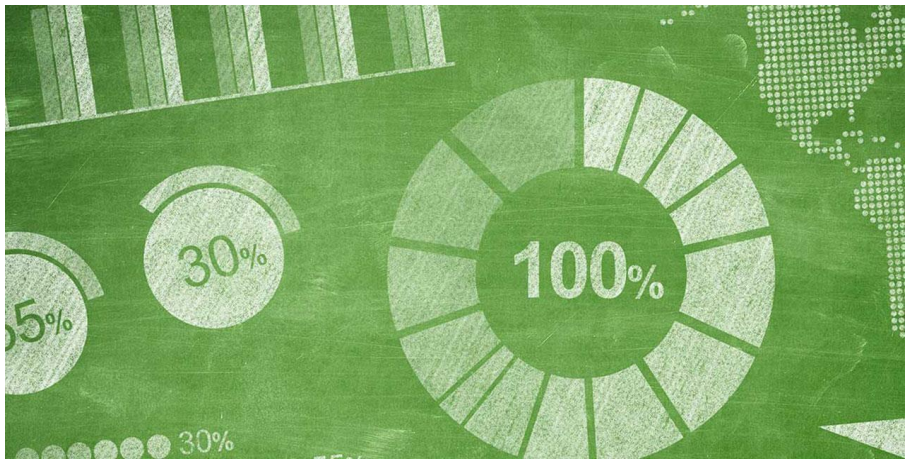
Create enthusiastic fields for talents Attractive for game changers

We are taboo breakers Selective in skills

Promote imagination and idea

We like dreamers

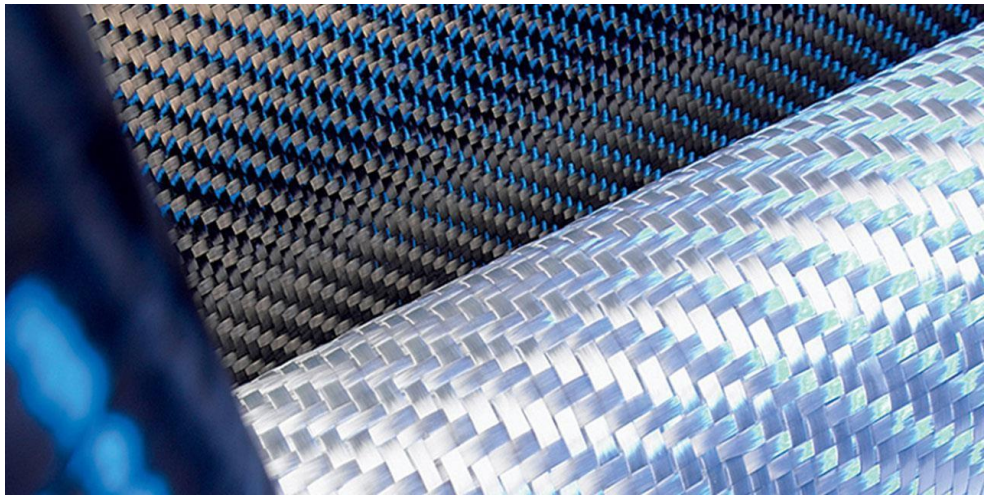
Make those changes that are important for our own future



TECHNOLOGY

COMPOSITE MATERIAL TECNOLOGY

A composite material (CM) is made from two or more constituent materials with significantly different physical or chemical properties. The new material may be preferred for many reasons: common examples include materials which are stronger, lighter, or less expensive when compared to traditional material. Based on the type of CM, it is characterized or determined by unusually high strength fibers with unusually high stiffness, or modulus of elasticity characteristics, compared to other materials



ADVANTAGES

TECHNOLOGY

- Strength
- Stiffness
- Lightweight
- Thermally Stable - Don’t change shape, as they change in temperature
- Tolerant to Fatigue
- Where shape is of critical importance; like aircraft wings
- Environment Friendly
- Recyclable
- Non-toxic
- Non-polluting
- Sustainable
- Energy efficient
- Reduces usage of fossil fuels
- Reduces the waste
- Reduces the usage of raw materials

ENVIROMENT FRIENDLY

REDUCE, REUSE, RECYCLE.

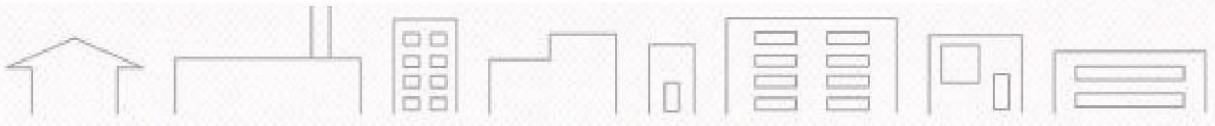
Yes! We are Eco-Friendly.

Tasblock believes in Innovation. We have been investing in Research & Development and will keep doing so. Creating new, sustainable and eco-friendly systems will help our societies, our planet. We take this as a duty to work harder and do better for the next generations.

- Tasblock is recyclable
- Tasblock is reusable
- Tasblock is lightweight
- Tasblock is non-toxic
- Tasblock is non-polluting
- Tasblock is sustainable
- Tasblock is energy efficient
- Tasblock is time efficient
- Reduces the waste
- Reduces the usage of raw materials of conventional construction systems

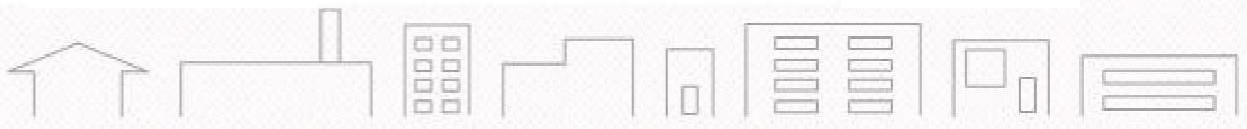
COMPARISON TABLE FOR TASBLOCK COMPOSITE STRUCTURES AND LIGHT STEEL PREFAB STRUCTURES

	TASBLOCK PREFAB SYSTEMS		REGULAR PREFAB STRUCTURE
1	**WALLS ARE MONOBLOCK ELEMENTS** (d=10 cm)	1	**WALLS ARE COMPOSED OF 3 LAYERS.**
2	**HEAT INSULATION INDEX IS HIGH** The material itself is heat insulating. No irregularities Coefficient of thermal conductivity , λ= 0,05 w/MK TS825	2	**HEAT INSULATION** (Achieved through additional heat insulation coating.) Walls require plaster work. Depends on the properties of the additional material to be used.
3	**NO STRUCTURE DEFORMATION** As wall elements of the structure are monoblock, no different work or irregularities occur on the structure	3	**IRREGULAR DEFORMATIONS CAN BE SEEN ON THE STRUCTURE IN TIME** Subject to different kinds of deformations inside as the structural elements are composed of 3 layers.
4	**DOES NOT AFFECTED BY ULTRAVIOLET RAYS** ASTM-D 4329 and ASTM-G-53	4	**AFFECTED BY ULTRAVIOLET RAYS** Since concrete-brick buildings are heavy structures, they add more load on the ground. Cost of foundation ground increases with soil improvements.
5	**FIRE-RESISTANT FIRE-PROOF** Horizontal Burning Speed: Type A Inflammableness: UL 94 V0 Hot Wire Ignitability Temperature: 750°C TS EN 60595-2-3	5	**INSULATION MATERIALS USED IN THE BUILDING ARE FLAMMABLE AND PRODUCE SMOKE**
6	**PRODUCT LIFE** 100 YEARS ON A THEORITICAL BASIS Humidity- and corrosion-proof No maintenance required to prevent wear and deterioration.	6	**PRODUCT LIFE** The building starts to deteriorate and decay depending on how fast the protective materials used against the harmful effects of humidity, water and air on the structural materials start to lose their properties.
7	**INSTALLATION TIME : 3 days / 100m²** Can be completed and taken into service within a shorter period compared to regular prefab structures of the same size.	7	**INSTALLATION TIME : 15 days / 100 m²**
8	**HORIZONTAL LOAD RESISTANCE** Building does not experience any cracks or deformation due to earthquake or wind loads and therefore no damage requiring repair takes place.	8	**HORIZONTAL LOAD RESISTANCE** Building does not experience any cracks or deformation due to earthquake or wind loads and therefore no damage requiring repair takes place.
9	**CONDENSATION DUE HEAT DIFFERENCE** Problems such as humidification, condensation, etc. which may take place due to hot-cold differences do not occur, as composite materials' coefficient of heat conductivity is too low.	9	**SUBJECT TO CONDENSATION DUE TO HEAT DIFFERENCE** Humidification and condensation problems may be experienced due to monoblock material.
10	**SNOW LOAD CALCULATION** As the composite material has a high level of strength, the roof is designed considering a snow load of 150 kg / m2.	10	**SNOW LOAD** Regular prefab structures are designed for 75 kg/m2 snow load.
11	**FLOOR NUMBER** Number of floors an be increased upon request, to the extent allowed by the material geometry and strength.	11	**FLOOR NUMBER** Usually made in maximum 2 layers.
12	**NOISE FORMATION IN THE BUILDING** As composite is an environment-friendly and warm material, no disturbing noise (creaks, buzzing, etc.) is formed during the use of the building by people.	12	**NOISE FORMATION IN THE BUILDING** Since the sheet plates used in the prefab structures are ultra thin, sometimes noises can be heard (creaks, buzzing, etc.) due to wind or other factors. This noise may reach disturbing levels for the people living in the building.



COMPARISON TABLE FOR RENCO COMPOSITE STRUCTURES AND CONCRETE – BRICK STRUCTURES

	TASBLOCK COMPOSITE STRUCTURES	REINFORCED CONCRETE - BRICK STRUCTURE
1	**WALLS ARE MONOBLOCK ELEMENTS** (d=10 cm) Therefore no plaster work is required.	**WALLS ARE MADE OF BRICKS.** Walls require plaster work.
2	**PAINT AND COATING APPLICATIONS CAN BE PERFORMED ON THE WALS DIRECTLY.**	**PLASTER WORK IS REQUIRED BEFORE PAINTING THE WALLS.** Walls require plaster work.
3	**HEAT INSULATION INDEX IS HIGH** The material itself is heat insulating. No irregularities Coefficient of thermal conductivity , λ= 0,05 w/MK TS825 Water vapor transmission properties TS EN 12086 < 0.3%	**THERMAL SHEATHING IS REQUIRED FOR HEAT INSULATION.** Building operating costs substantially increase without thermal sheathing. Reduced living comfort in the building decreasing the life of the building
4	**NO STRUCTURE DEFORMATION** As wall elements of the structure are monoblock, no different work or irregularities occur on the structure composite buildings are lightweight structures. They add only a small amount of load on the ground	**NO IRREGULAR DEFORMATION ON THE STRUCTURE** Since concrete-brick buildings are heavy structures, they add more load on the ground. Cost of foundation ground increases with soil improvements.
5	**DOES NOT AFFECTED BY ULTRAVIOLET RAYS** ASTM-D 4329 and ASTM-G-53	**DOES NOT AFFECTED BY ULTRAVIOLET RAYS**
6	**FIRE-RESISTANT FIRE-PROOF** Horizontal Burning Speed: Type A Inflammableness: UL 94 V0 Hot Wire Ignitability Temperature: 750°C TS EN 60595-2-3	**REINFORCED CONCRETE STRUCTURES LOSE THEIR SUPPORTING PROPERTIES DUE TO FIRE** Concrete is subject to structural deterioration due to fires at the building. Loses its supporting properties.
7	**PRODUCT LIFE** 100 YEARS ON A THEORITICAL BASIS Humidity- and corrosion-proof No maintenance required to prevent wear and deterioration.	**PRODUCT LIFE** 60-70 YEARS ON A THEORITICAL BASIS The building is affected by humidity, resulting in substantially decreased building life. Repair is required.
8	**INSTALLATION TIME : 3 days / 100m²** Can be completed and taken into service within a shorter period compared to regular prefab structures of the same size.	**INSTALLATION TIME :** Production time of a structure with same architecture of a composite structure is APPROXIMATELY : 25 days / 100m²
9	**HORIZONTAL LOAD RESISTANCE** Building does not experience any cracks or deformation due to earthquake or wind loads and therefore no damage requiring repair takes place.	**HORIZONTAL LOAD RESISTANCE** The building is earthquake and wind resistant; however, increased building load results in substantially higher levels of earthquake load for the building. Earthquake loads increase in parallel to the load of the building.
10	**SNOW LOAD CALCULATION** As the composite material has a high level of strength, the roof is designed considering a snow load of 150 kg / m2.	**SNOW LOAD** Designed for 75kg/m2 and 150 kg/m2 loads in concrete and brick buildings, respectively.



MAIN FEATURES

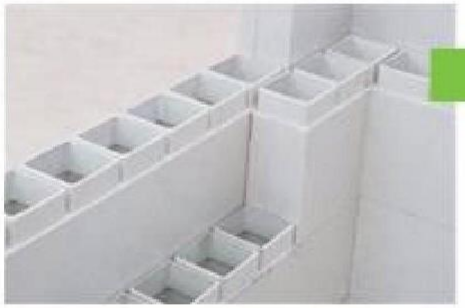
The cost-efficient proprietary revolutionary products are ecofriendly and eliminate the need for the extensive consumption of natural resources such as wood or the raw materials forming the concrete. It allows fast and easy design, development, manufacturing, assembly and installation of various types and sizes of residential and commercial buildings in a variety of location options.

- Affordable
- Tremendous flexibility in design
- Ideal to withstand strong earthquakes
- Resistant to tornado and hurricane strength winds up to 225km/hr
- Energy efficient
- Creates waterproof structures
- Fire resistant
- Impervious to termites, not affected by mold, other fungi, algae, wateror osmosis, suitable for flood proneareas
- Easy and fast assembly
- Greater than 150kg/m2 snow load resistance
- Lower maintenance cost
- Sound insulation

SMART BUILDING SYSTEMS

Floor Systems

10 cm High Floor Systems



Wall Systems

Wall Systems With Thickness of 10 cm, 20 cm

Roof Systems

Roof Systems With 6 cm X 6 cm and 10 cm X 10 cm Truss Systems

COMPOSITE MODULAR SYSTEMS

TASBLOCK provides a variety of renewable composite turnkey product solutions for the below categories among others:

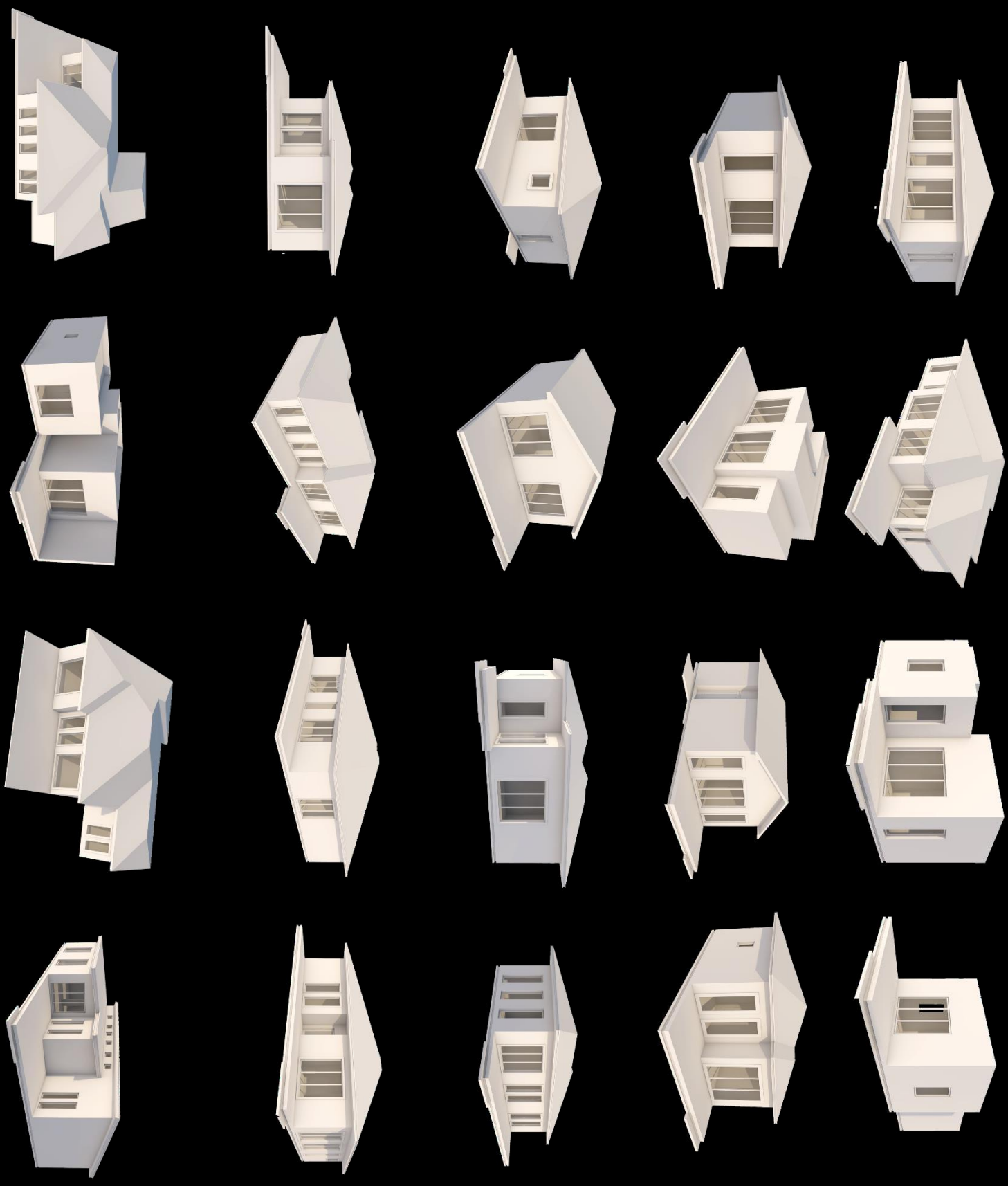
- Low, Middle and High Income Housing
- Disaster Relief Housing
- Schools
- Office Buildings
- Factory Buildings
- Government and Administration Buildings
- Restaurants
- Warehouses and Storage Facilities
- Retail Stores and Shopping Centers
- Police and Gas Stations
- Medical Facilities
- Hangars
- Bulletproof Guard Cabins
- Military Camps
- Farm Houses, Forest Houses, Village Houses
- Multi Storey Buildings

Innovative

Fast

Modern

HOMES



1+1

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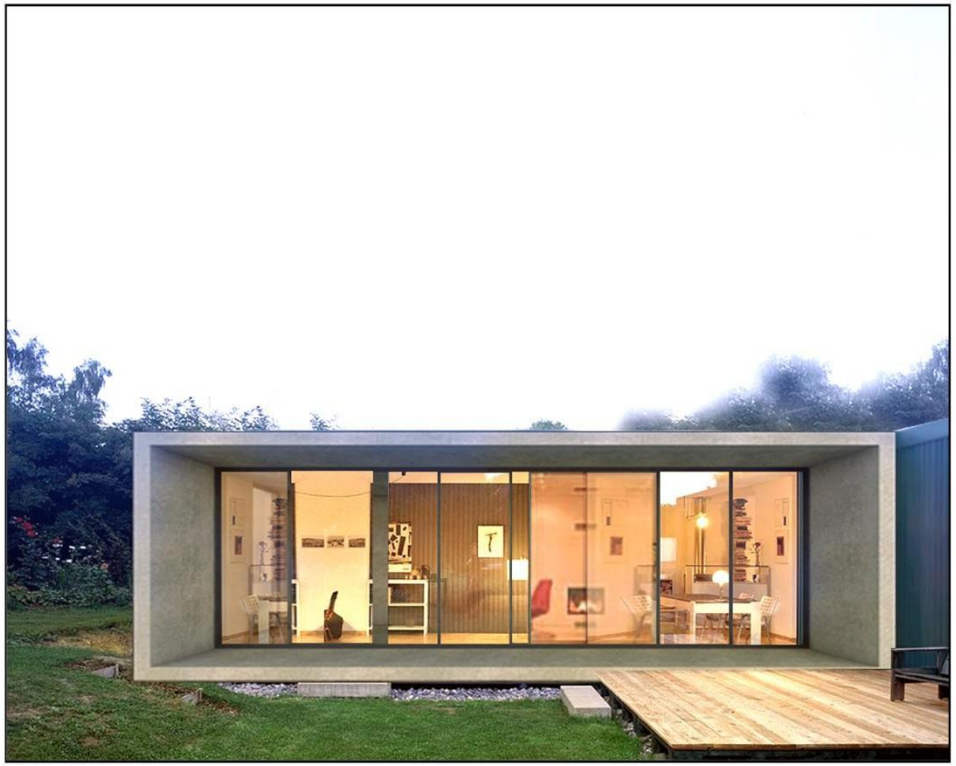
Les Caves House104,86 m²

1+1



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Malibu House107,34 m²

4+1

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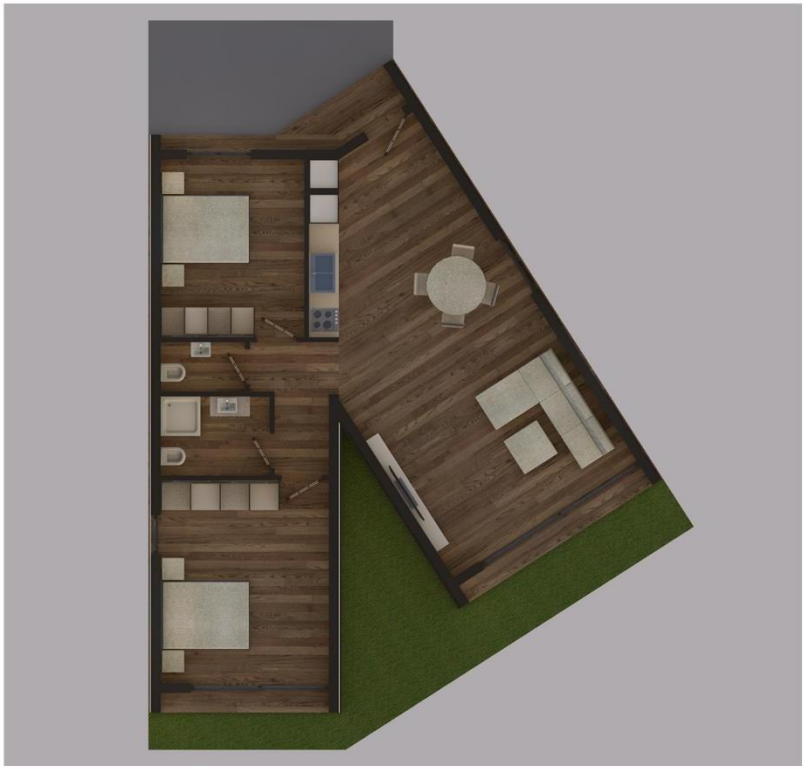
Nord House151,89 m²

1+1



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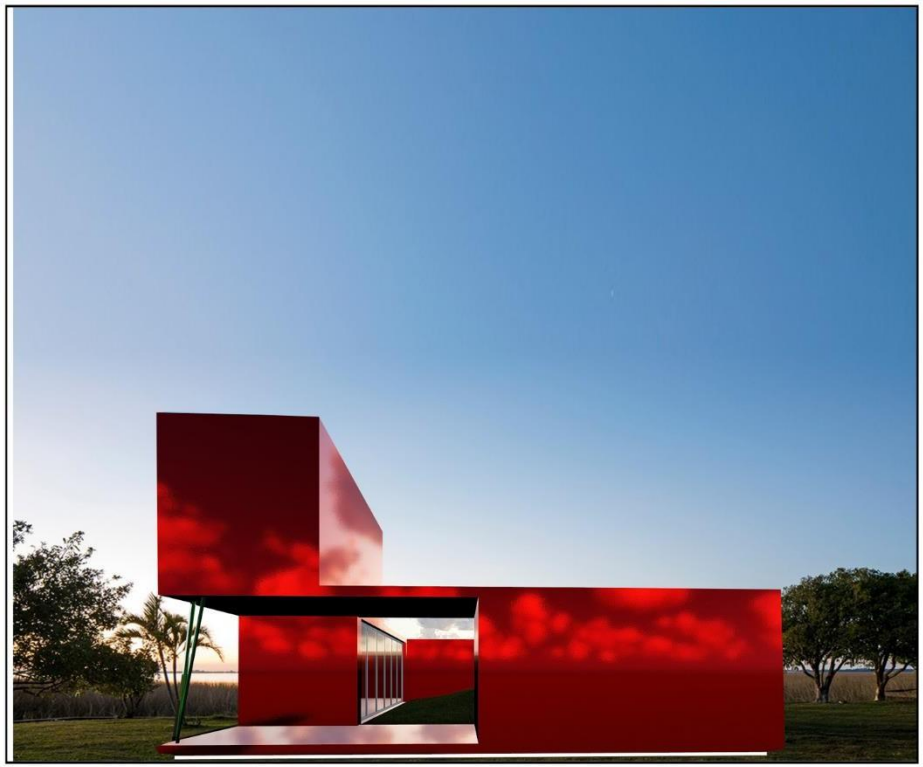
Prive House 95,37 m²

3+3



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Rosso House307,96 m²

3+1

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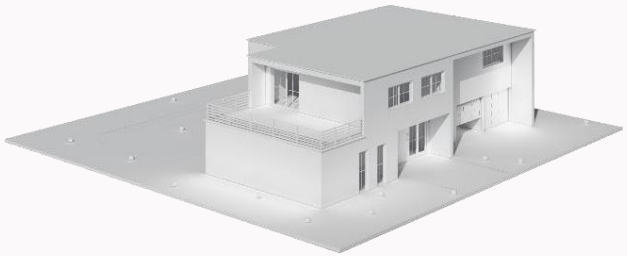
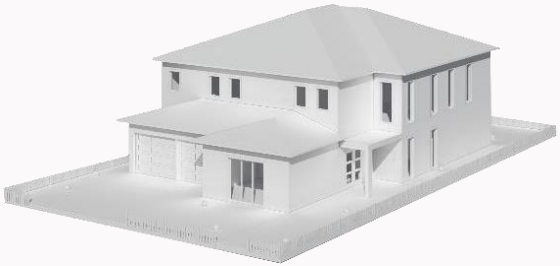
Felix House 147,10 m²

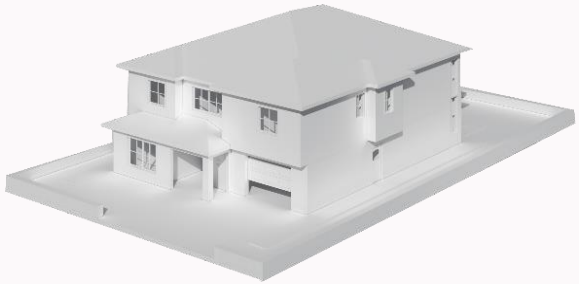
MULTI STOREY HOMES



MULTI STOREY HOMES



MULTI STOREY HOMES



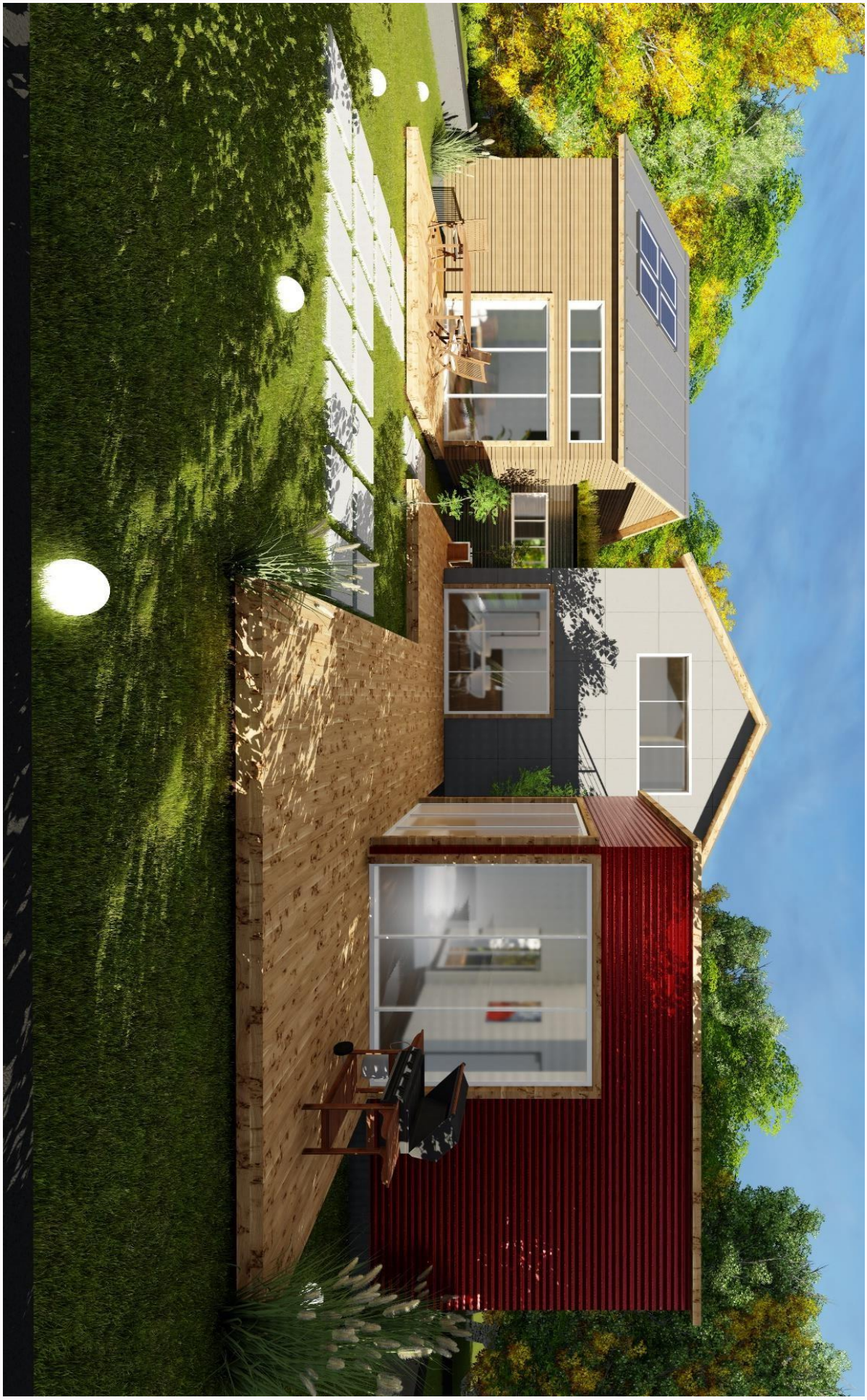
CUSTOM HOMES

CUSTOM HOMES

CUSTOM HOMES

CUSTOM HOMES

CUSTOM HOMES



CUSTOM HOMES

TOWN HOMES

TOWN HOMES

SOCIAL & GOVERNMENT STRUCTURES

INDUSTRIAL STRUCTURES

COLD STORAGE UNITS

INDUSTRIAL STRUCTURES

WAREHOUSES

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VARIOUS REALIZED PROJECTS




Shell Construction of a House in Moscow (Finished in 3 days)






Karadeniz Style Home, Trabzon (Finished in 6 weeks)






Town Governor House, Arifiye (Finished in 4 weeks)






Terrace Townhomes, Izmit (Finished in 4 weeks)



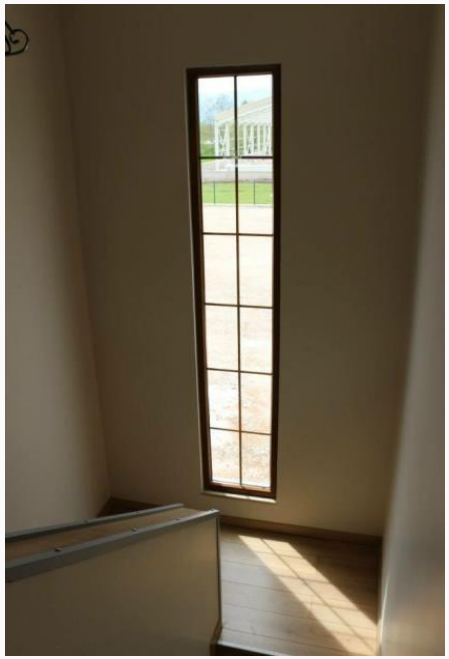



4 Rooms, One Storey House (Finished in 3 weeks)

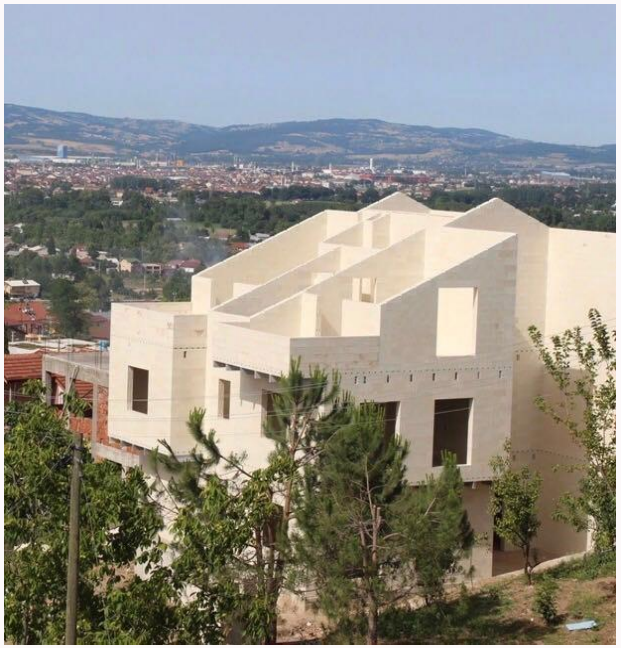
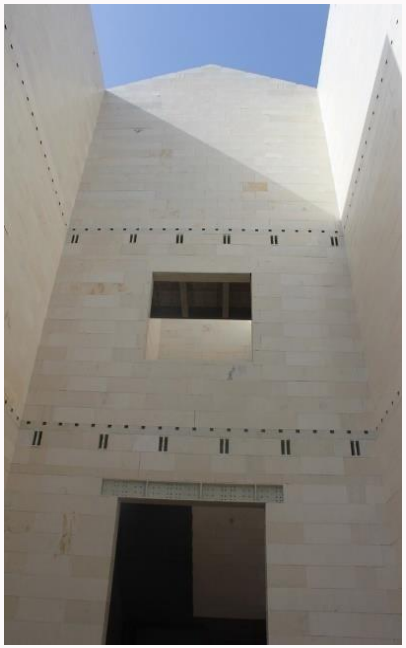





Cyprus Villa (Finished in 4 weeks)



Villa at Tokat city (Finished in 4 weeks)

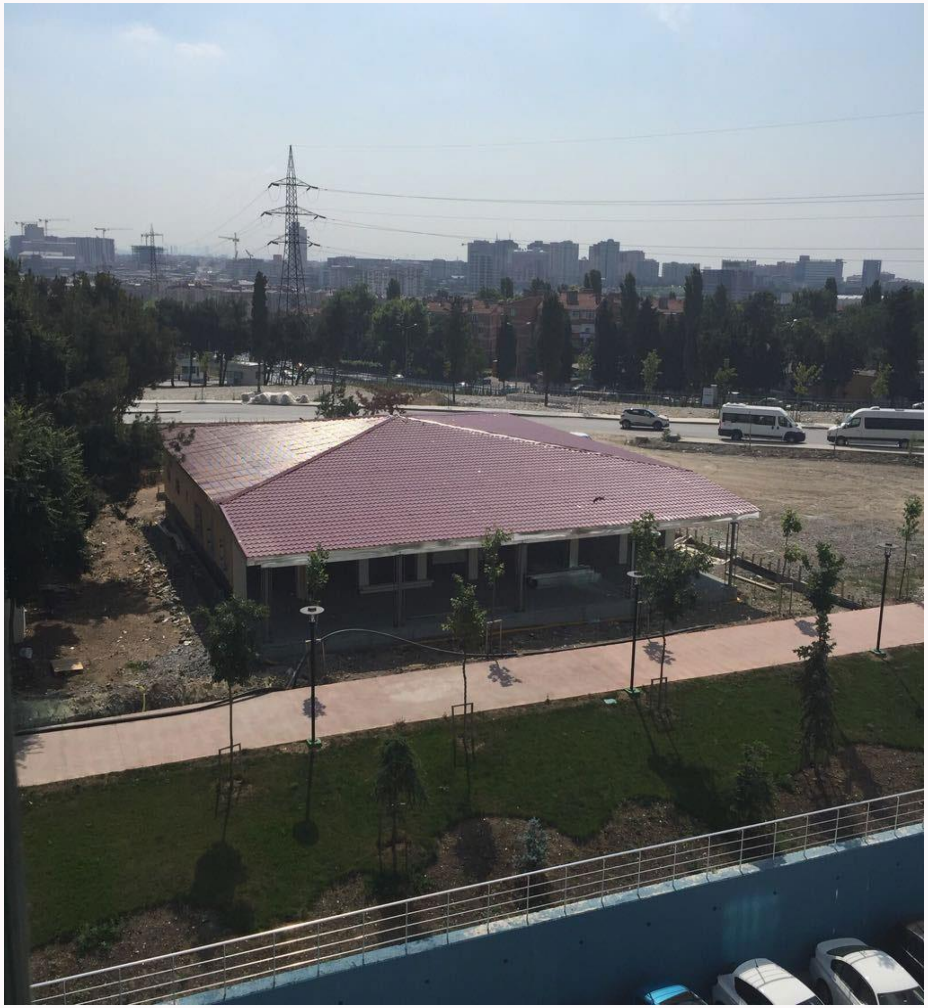





Shell Construction of a 4400 sq feet House (Finished in 7 days)

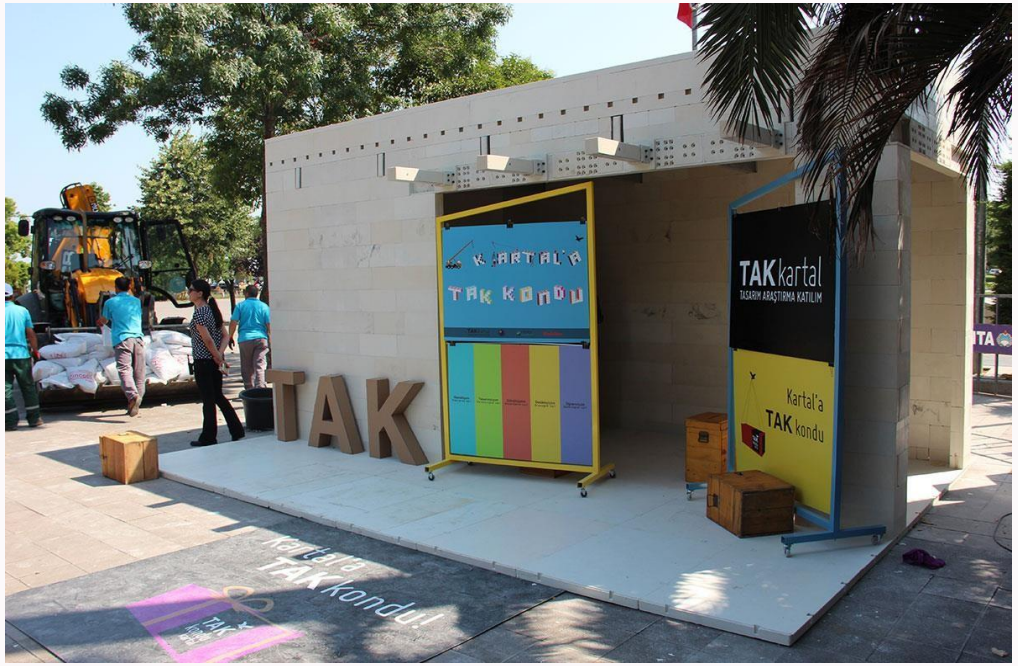
Shell Construction of a 1100 sq feet House (Finished in 3 days)

Poultry



Cafes (Finished in 4 weeks)

TAK Kartal Sales Office (Finished in 7 days)



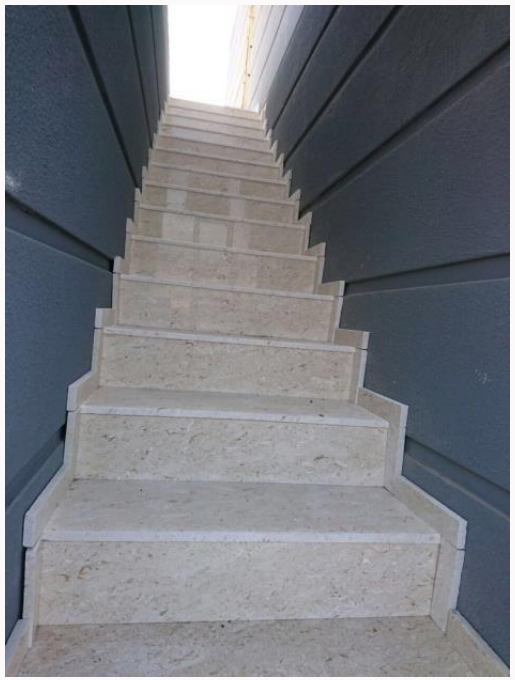
TAK Kartal Sales Office (Finished in 7 days)






Social Housing 5 Storey (Finished in 10 weeks)

Simav Earthquake Aftermath Emergency Shelters (Finished in 5 weeks)



Social Housing (Finished in 2 weeks)

Pepsi Social Housing (Finished in 4 weeks)






Van Earthquake Aftermath Emergency Shelters (Finished in 4 weeks)

Ortadoğu Enerji (Finished in 3 weeks)

Pepsi Warehouse (Finished in 6 weeks)

Manisa Kula Municipal Water Tank 15 Tonnes (Finished in 1 day)

Manisa Yağcılar Water Tank 200 Tonnes (Finished in 1 day)

Wedding Hall (Finished in 4 weeks)

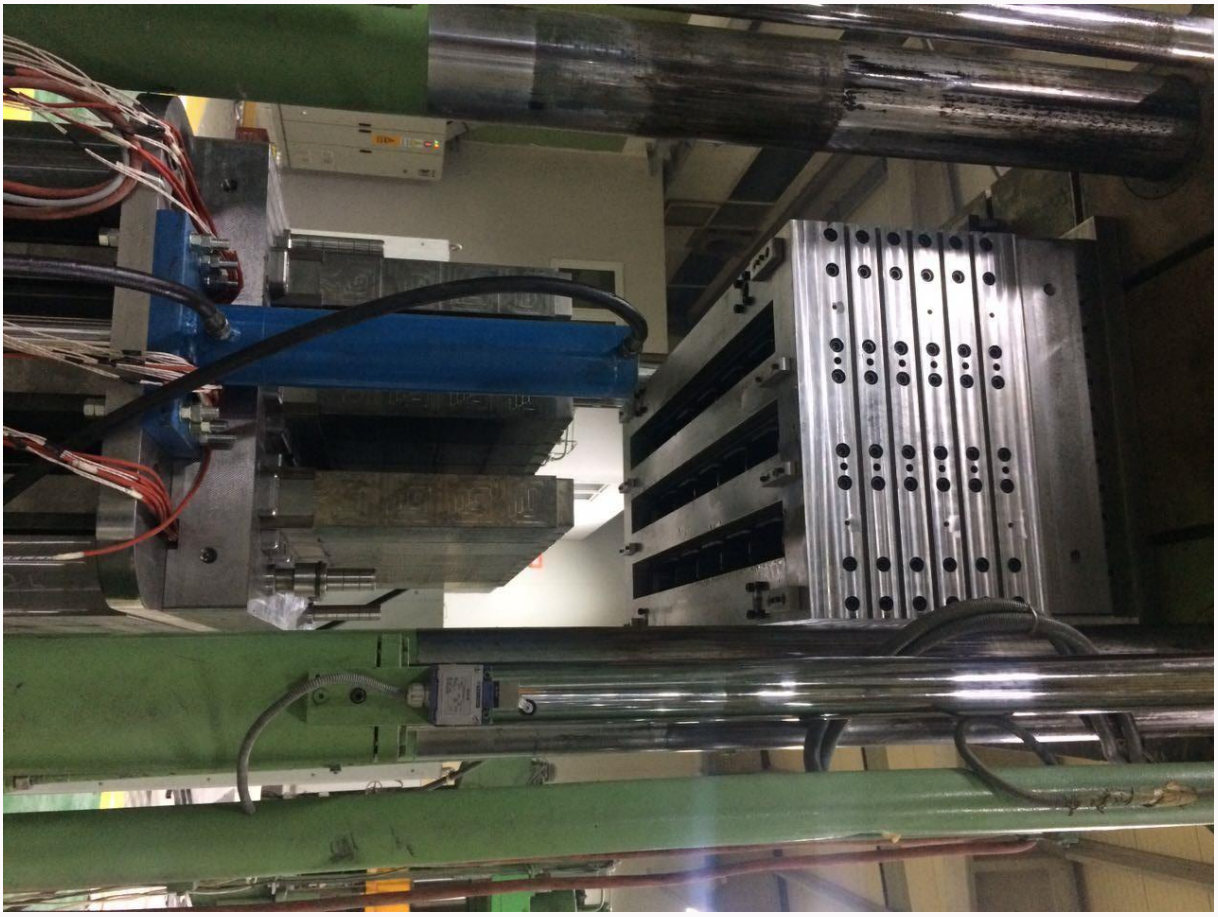
Emergency Medical Facility (Finished in 2 weeks)

Selendi Fire Fighter Station (Finished in 3 weeks)

Public Elementary School (Finished in 4 weeks)

Manufacturing Facilities

Manufacturing Facilities



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TECHNICAL DATA OF TASBLOCK BRICKS

Wall Brick

Description or item	Dimensions	Bulk Density (kg/m³)
Tasblock Wall brick	20 cm x 30 cm x 60 cm	585 kg/m³
Compressive Strength	: 10,90 MPa	
Thermal Conductivity (W/mK)	: 0,15 ƛ W/mK	

Roof Panel

Description or item	Dimensions	Bulk Density (kg/m³)
Composite roof panel	80 cm x 120 cm x 5 cm	450 kg/m³
Compressive Strength	: 38 - 43 MPa	
Bending Strength	: 35 MPa	
Thermal Conductivity (W/mK)	: 0,035 ƛ W/mK	

Roof panel profiles

Bulk Density (kg/m³)	: 1.800 kg/m³
Compressive Strength	: 38 - 43 MPa
Bending Strength	: 35 MPa
Thermal Conductivity (W/mK)	: 0,035 ƛ W/mK

Test Reports

Quality Accuracy Assurance

Fenestration Testing Laboratory, Inc.

8148 N.W. 74th Avenue Medley, FL 33166 Phone: (305) 885-3328 Fax: (305) 885-3329 (888) 819-7877
e-mail: clientservices@fenlab.com www.ftl-inc.com

Report Date: 07/05/2011
File Number: 11-646
Page: 2 of 6
Lab Number: 6587
Project Number: 11-3067

4.2 Density of Rigid Cellular Plastics ASTM D 1622-08

Test Results		Status
Average of all three samples	1.824 lbs./ft³	Passed

4.3 Water Absorption of Rigid Cellular Plastics ASTM D 2842

Sample Numbers	% by Volume Water Absorption
(1)	0.080
(2)	0.077
(3)	0.079
Average	0.079

4.4 Tensile Properties of Plastics ASTM D 638

No	Thickness (in.)	Width (in.)	Area (sq.in.)	Ultimate Load (lbs.)	Ultimate Stress (psi)	Elongation% in 2 in.
1	0.165"	0.500"	0.084"	576	6,844	3.2
2	0.165"	0.500"	0.084"	482	5,729	1.2
3	0.165"	0.500"	0.084"	574	6,812	2.0

ISTANBUL TECHNICAL UNIVERSITY – FACULTY OF CIVIL ENGINEERING

CONSTRUCTION MATERIAL LABORATORY

34469 MASLAK / ISTANBUL TEL: (0212) 285 3757-58 FAKS: (0212) 285 6587

3-UL94 – FLAME TEST

Flammability – 2mm.
Standard: UL 94

Result: V0

3-DIN 75200 – HORIZONTAL BURNING RATE

Horizontal Burning Rate
Standard: DIN 75200

Result: TIP A

Seal & Signature
Laboratory Supervisor
Asst. Prof. Dr. Hasan YILDIRIM

Test Reports

Quality Accuracy Assurance

Fenestration Testing Laboratory, Inc.

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e-mail: clientservices@fenlab.com www.ftl-inc.com

Report Date: 07/05/2011
File Number: 11-646
Page: 1 of 6
Lab Number: 6587
Project Number: 11-3067

Client: Coastal Construction Group
Address: 5959 Blue Lagoon Drive Suite 200
Miami, Florida 33126

1.0 INTRODUCTION

At the request of Coastal Construction Group, the tests listed in Section 3.0 below were conducted on their Renco building system composite material product and the test standards listed in section 3.0 were used as a method for testing not all of the requirements of each listed test standard were followed.

2.0 MATERIAL DESCRIPTION

All samples for testing were selected by Coastal Construction Group and shipped to Fenestration Testing laboratory, testing facility in Medley, Florida.

3.0 TEST SPECIFICATIONS

TEST	REFERENCED STANDARD
1. Compressive Properties of Rigid Cellular Plastics	ASTM D1621-2010
2. Apparent Density of Rigid Cellular Plastics	ASTM D1622-2008
3. Water Absorption of Rigid Cellular Plastics	ASTM D2842-2006
4. Tensile Properties of Plastics	ASTM D638-2010
5. Strength of Anchors in Concrete and Masonry	ASTM E488-2010
6. Shear Test of Anchors	
7.0 Glue Tensile Test	
8.0 Dead Load Test	

4.0 TEST RESULTS

4.1 Compressive Strength per ASTM D1621-2010

Sample Numbers	Sample Size (inches)			Area (in^2)	Compressive Load (lbf)
	L	W	Thickness		
(1)	7.875	7.875	4.000	62.0	19,669
(2)	7.875	7.875	4.000	62.0	19,652
(3)	7.875	7.875	4.000	62.0	19,671
(4)	7.875	7.875	4.000	62.0	19,642
(5)	7.875	7.875	4.000	62.0	19,675
Average					19,662

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4.0 TEST RESULTS

4.1 Compressive Strength per ASTM D1621-2010

Sample Numbers	Sample Size (inches)			Area (in^2)	Compressive Load (lbf)
	L	W	Thickness		
(1)	7.875	7.875	4.000	62.0	19,669
(2)	7.875	7.875	4.000	62.0	19,652
(3)	7.875	7.875	4.000	62.0	19,671
(4)	7.875	7.875	4.000	62.0	19,642
(5)	7.875	7.875	4.000	62.0	19,675

4.2 Density of Rigid Cellular Plastics ASTM D 1622-08

Test Results		Status
Average of all three samples	1.824 lbs./ft^3	Passed

4.3 Water Absorption of Rigid Cellular Plastics ASTM D 2842

Sample Numbers	% by Volume Water Absorption
(1)	0.080
(2)	0.077
(3)	0.079
Average	0.079

4.4 Tensile Properties of Plastics ASTM D 638

No	Thickness (in.)	Width (in.)	Area (sq.in.)	Ultimate Load (lbs.)	Ultimate Stress (psi)	Elongation% in 2 in.
1	0.165"	0.500"	0.084"	576	6,844	3.2
2	0.165"	0.500"	0.084"	482	5,729	1.2
3	0.165"	0.500"	0.084"	574	6,812	2.0

İTÜ

T.C.
İSTANBUL TEKNİK ÜNİVERSİTESİ REKTÖRLÜĞÜ
DEPREM MÜHENDİSLİĞİ VE AFET YÖNETİMİ ENSTİTÜSÜ
MÜDÜRLÜĞÜ

Tasblock İstanbul Modüler Yapı San. ve Dış Tic. A.Ş.
FRP numuneleri hakkında

EK TEKNİK RAPOR

Teknik Rapor No:

Hazırlayan

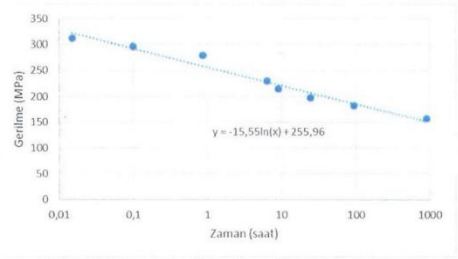
Doç. Dr. Bekir Y. PEKMEZCİ
İnşaat Fakültesi Öğretim Üyesi

İstanbul Teknik Üniversitesi
34469 Maslak, İstanbul

Tasblock İstanbul Modüler Yapı San. ve Dış Tic. A.Ş.

Yapmış olduğunuz başvuru üzerine tarafınıza iletmiş olduğumuz Tasblock markalı FRP numuneleri üzerinde uzun süreli çekmede sünme deneyleri yapılmış, elde edilen sonuçlar aşağıda verilmiştir. Deneyler Ticem Labs laboratuvarında gerçekleştirilmiştir. Sünme deneyinde çekme dayanımının belirli oranları numune üzerine uygulanmış ve sünmede göçme oranı-zaman ilişkileri elde edilmiştir.

Deneyler 1000 saatlik süre sonunda sonlandırılmıştır. Uzun süreli çekme deneyi sonucunda elde edilmiş olan uygulanan gerilme-göçme zamanı ilişkisi Şekil 1'de gösterilmektedir.



Şekil 1. Uzun süreli gerilme deneyi sonuçları

Deneysel çalışmadan elde edilen ilişkiye göre Tablo 1'de verilen süreler için göçme gerilmeleri hesaplanmıştır.

Süresi (saat) Time (hour)	Hesaplanan göçme gerilmesi (MPa) Calculated failure stress (MPa)
1	256
10	220
100	184
1000	149
10000	113

Doç. Dr. Bekir Y. PEKMEZCİ
İTÜ İnşaat Fakültesi
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Doç. Dr. Bekir Y. PEKMEZCİ
İnşaat Fakültesi Öğretim Üyesi

İstanbul Teknik Üniversitesi
34469 Maslak, İstanbul

1. GİRİŞ

Yapmış olduğunuz başvuru üzerine tarafınıza iletmiş olduğumuz Tasblock markalı FRP numuneleri üzerinde Tablo 1'de yer alan deneyler Ticem Labs laboratuvarında gerçekleştirilmiştir. Deney sonuçları aşağıda sunulmuştur. Deney sonuçlarını içeren İngilizce tablolar Ek1'de (annex1) verilmiştir.

Tablo 1. Çalışma kapsamında yapılan deneyler

Deney No	Deney	Test Standart
1	Çekme Dayanımı	ASTM D7205
2	Basınç Dayanımı	ASTM D695
3	Kayma Dayanımı	ASTM D5379
4	Elastisite Modülü	ASTM D7205
5	Poisson Oranı	ASTM C469

2. DENEYSEL ÇALIŞMALAR

2.1. Çekme dayanımı deneyi

Çekme dayanımı deneyi ASTM D7205 standardı esaslarına göre yapılmıştır. Deney sonuçları Tablo 2'de verilmiştir.

Tablo 2. Çekme dayanımı deneyi sonuçları

Numune	Ölçü (mm)	Kesit Alanı (mm^2)	Kopma Yükü (kN)	Çekme Dayanımı (Mpa)
1	7,8	48,2	16,5	205,5
2	7,8	48,2	14,6	181,7
3	7,8	48,2	16,4	203,8
Ortalama				197

2.2. Basınç dayanımı deneyi

Basınç dayanımı deneyi ASTM D695 esaslarına göre yapılmıştır. Deney sonuçları Tablo 3'te verilmiştir.

Tablo 3. Basınç dayanımı deneyi sonuçları

Numune	Boyutlar (mm)			Yük (kN)	Basınç Dayanımı (Mpa)
	a	b	h		
1	70,2	70,5	70,3	1281,5	206,8
2	70,5	70,3	70,5	1720,8	277,7
3	70,3	70,5	70,2	1414,9	230,7
Ortalama					238,4

2.3. Kayma dayanımı deneyi

Kayma dayanımı deneyi ASTM D5379 esaslarına göre yapılmıştır. Deney sonuçları Tablo 4'de verilmektedir.

Tablo 4. Kayma dayanımı deneyi sonuçları

Numune	Boyutlar (mm)		Yük (kN)	Basınç Dayanımı (Mpa)
	a	b		
N1.1	5,0	8,0	2,41	36,2
N1.2	5,0	8,0	2,63	39,5
N1.3	5,1	8,0	2,28	33,8
Ortalama				36,5
N2.1	5,0	8,0	1,16	17,5
N2.2	5,0	8,0	1,24	18,6
N2.3	5,0	8,0	1,18	18,2
Ortalama				18,1

*Numune isimleri tarafınızdan verilmiştir.

2.4. Çekmede elastisite modülü tayini deneyi

Elastisite modülü tayini deneyi ASTM D7205 esaslarına göre yapılmıştır. Deneylerden elde edilen gerilme şekil değiştirme ilişkileri Şekil 1-2'de verilmiştir. Deney sonuçları Tablo 5'te verilmiştir.

Tablo 5. Elastisite modülü tayini deneyi sonuçları

Numune	Boyutlar (mm)		Kopma Yükü (kN)	Çekme Dayanımı (Mpa)	Elastisite Dayanımı (Mpa)
	a	b			
N1.1	4,73	13,00	14,19	138,5	21,4
N1.2	4,73	13,05	15,18	147,4	22,8
N1.3	4,72	12,95	15,11	148,3	22,98
Ortalama				144,7	22,4
N2.1	5,16	12,92	22,25	200,2	32,4
N2.2	5,16	12,94	20,23	181,8	28,5
N2.3	5,15	12,95	21,66	194,4	29,9
Ortalama				192,1	30,3

*Numune isimleri tarafınızdan verilmiştir.

2.5. Poisson oranı tayini deneyi

Poisson oranı tayini deneyi ASTM C469 esaslarına göre yapılmıştır. Deneyler sırasında elde edilen şekil değiştirme ilişkileri Şekil 3'te verilmiştir. Deney sonuçları Tablo 6'da verilmiştir.

Tablo 6. Poisson oranı deneyi sonuçları

Numune	μ
1	0,30
2	0,33
3	0,31
Ortalama	0,31

Doç. Dr. Bekir Y. PEKMEZCİ
İTÜ İnşaat Fakültesi
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Annex1. Test Results in English

Producer: Tasblock İstanbul Modüler Yapı San. ve Dış Tic. A.Ş.
Sample : FRP samples in various dimensions (50x100, 40x40, 50x30, 30x30,24x24,100x100,50x200 mm)

Table A1. FRP specimen test results

Test	Test Standart	Unit	Test Results
Tensile Strength	ASTM D7205	MPa	205,5
			181,7
			203,8
Average			197
Compressive Strength	ASTM D695	MPa	206,8
			277,7
			230,7
Average			238,4
Shear Strength (N1*)	ASTM D5379	MPa	36,2
			39,5
			33,8
Average			36,5
Shear Strength (N2*)	ASTM D5379	MPa	17,5
			18,6
			18,2
Average			18,1
Modulus of Elasticity (N1*)	ASTM D7205	MPa	21,4
			22,8
			22,98
Average			22,4
Modulus of Elasticity (N2*)	ASTM D7205	MPa	32,4
			28,5
			29,9
Average			30,3
Poisson Ratio	ASTM C469	MPa	0,30
			0,33
			0,31
Average			0,31

Dr. Bekir Y. Pekmezci
Assoc. Prof. of Civil Engineering
Istanbul Technical University
Faculty of Civil Engineering