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RAISED ACCESS FLOORING SYSTEMS

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TARGA RAISED FLOOR SYSTEMS

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TARGA RAISED FLOOR SYSTEMS

Rak 22, 1551 NA Westzaan

T +31 (0) 75 - 612 72 90
F +31 (0) 75 - 670 14 97
E info@integra-groep.com

INTEGRA-GROEP.COM

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TARGA RAISED FLOOR SYSTEMS

Targa Rasied Access Flooring superiority is the result of Integra's years of fabrication experience and extensive knowledge in the field of interior fit-out.

With its modularity, Targa Raised Access Flooring provides fast, easy and convenient access to the space beneath the paneling. This drastically improves the usability and functionality of the area of installation.

Targa is able to satisfy the needs of all architects and designers thanks to its various top surface covering options and panel types, therefore providing a harmony between aesthetics and functionality.

Targa Raised Access Flooring Systems are formed of 600 x 600 mm panels laid freely on top of galvanized steel substructure. Galvanized steel stringers are used where needed and/or requested by the client.

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TARGA

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TARGA RAISED FLOOR SYSTEMS

01

CHIPBOARD CORE PANELS

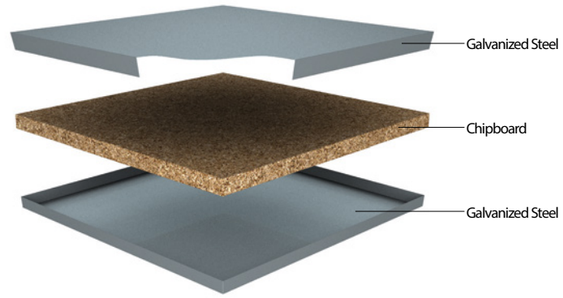
- Encapsulated Panels
- Foil Covered Panels
- PVC Covered Panels
- HPL Covered Panels
- Natural Wood Covered Panels

Encapsulated Panels

Targa Encapsulated Panels are completely encased in galvanized steel on the top, bottom, and side surfaces. They are fabricated using 28 mm / 30 mm, P2 or P6 grade chipboard. Due to the side surfaces being also covered with galvanized steel, Encapsulated Panels provide exceptional moisture, fire and wear resistance. Panels can be installed independently, and are suitable for Carpeting and LVT overlay.

VİKO | İSTANBUL

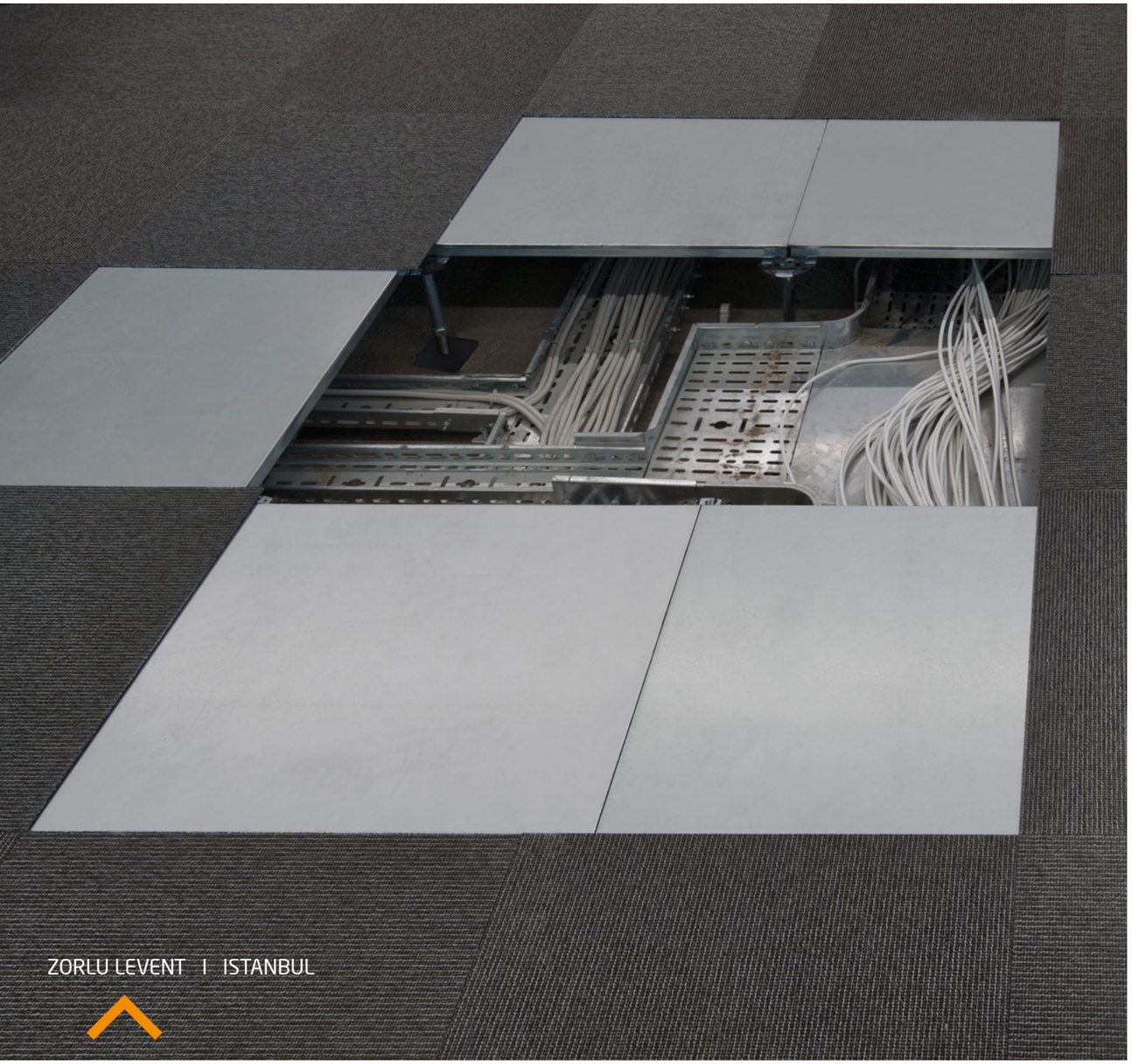
TG / EH - EM - EL5



Panel Specifications (Encapsulated Panel)			
Panel Type	**TG / EH**	**TG / EM**	**TG / EL5**
Panel Class	Encapsulated Panel	Encapsulated Panel	Encapsulated Panel
Panel Dimensions	600 x 600 mm	600 x 600 mm	600 x 600 mm
Panel Thickness	~ 31 mm	~ 31 mm	~ 29 mm
Top Surfaces	Galvanized Steel	Galvanized Steel	Galvanized Steel
Bottom Surfaces	Galvanized Steel	Galvanized Steel	Galvanized Steel
Edge Surfaces	Galvanized Steel	Galvanized Steel	Galvanized Steel
Panel Weight	~ 10,50 kg/panel	~ 9,50 kg/panel	~ 9,00 kg/panel
Panel Core	30 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)	30 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)	28 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)
Fire Reaction	Bfl-s1	Bfl-s1	Bfl-s1
Panel Load Ratings (According to EN 12825)			
Working Load	3,2 kN	2,0 kN	2,0 kN
Maximum Load	>6 kN	≥5 kN	≥6 kN
Panel Center Load	14267	12945	13254
Panel Edge Load	10884	6600	6324
Panel Corner Load	6776	5200	6226

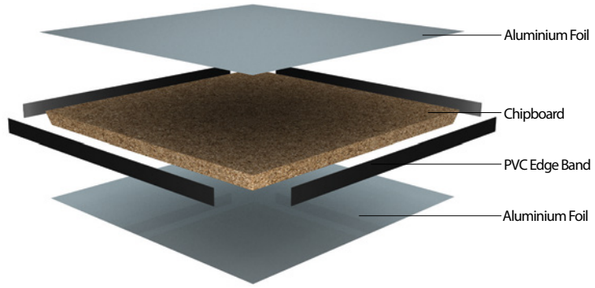
Foil Covered Panels

Targa Foil Covered Panels are fabricated using 30 mm / 38 mm
P2 or P6 grade Chipboard. Top surface is covered with Aluminium Foil and bottom surface is covered with either Aluminium Foil or Galvanized Steel. Sides are covered with PVC edge band. Panels can be installed independently, and are suitable for Carpeting and LVT overlay.

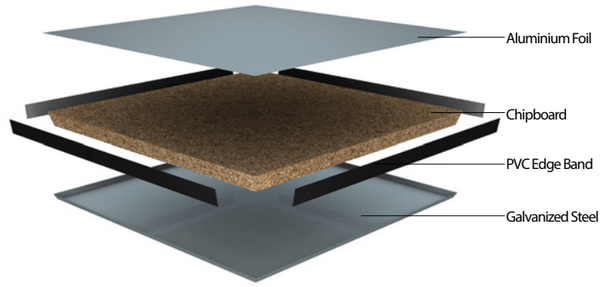


ZORLU LEVENT | ISTANBUL

TG / A30 - A38



TG / AT30 - AT38



Panel Specifications (Foil Covered Panel)				
Panel Type	**TG / A30**	**TG / AT30**	**TG / A38**	**TG / AT38**
Panel Class	Foil Covered Panel	Foil Covered Panel	Foil Covered Panel	Foil Covered Panel
Panel Dimensions	600 x 600 mm	600 x 600 mm	600 x 600 mm	600 x 600 mm
Panel Thickness	~ 30 mm	~ 30.5 mm	~ 38 mm	~ 38.5 mm
Top Surfaces	Aluminium Foil	Aluminium Foil	Aluminium Foil	Aluminium Foil
Bottom Surfaces	Aluminium Foil	Galvanized Steel	Aluminium Foil	Galvanized Steel
Edge Surfaces	PVC Edge Band	PVC Edge Band	PVC Edge Band	PVC Edge Band
Panel Weight	~ 7,50 kg/panel	~ 8,50 kg/panel	~ 9,50 kg/panel	~ 10,50 kg/panel
Panel Core	30 mm 610-680 kg/m³ P2 or P6 class chipboard (FSC Optional)	30 mm 610-680 kg/m³ P2 or P6 class chipboard (FSC Optional)	38 mm 610-680 kg/m³ P2 or P6 class chipboard (FSC Optional)	38 mm 610-680 kg/m³ P2 or P6 class chipboard (FSC Optional)
Fire Reaction	Bfl-s1	Bfl-s1	Bfl-s1	Bfl-s1
Panel Load Ratings (According to EN 12825)				
Working Load	1,8 kN	2,1 kN	2,4 kN	2,8 kN
Maximum Load	>4 kN	>6 kN	>6 kN	>8 kN
Panel Center Load	6962,26		12012	
Panel Edge Load	4755		7844	
Panel Corner Load	4608		7648	

PVC Covered Panels

Targa PVC Covered Panels are fabricated using 30 mm / 38 mm P2 or P6 grade Chipboard. Top surface is covered with PVC, bottom surface is covered with either Aluminium Foil or Galvanized Steel. Sides are covered with PVC edge band. If conductive PVC is requested, the panels can be conductive with the insertion of copper rods. Panels can be installed independently.

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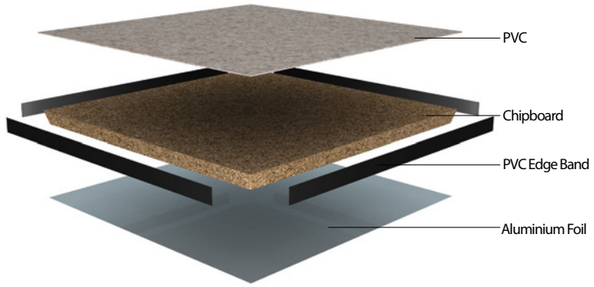
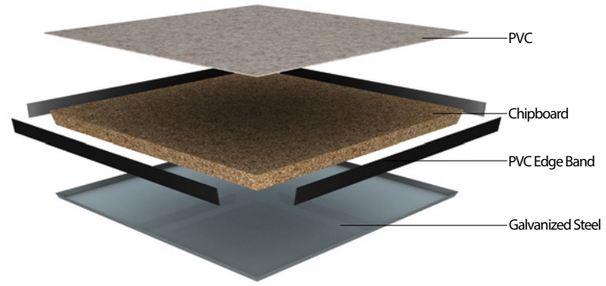
TG / V30 - V38



TG / VT30 - VT38



Panel Specifications (PVC Covered Panel)					
Panel Type	**TG / V30**	**TG / VT30**	**TG / V38**	**TG / VT38**	**TG / VTI30**
Panel Class	PVC Covered Panel	PVC Covered Panel	PVC Covered Panel	PVC Covered Panel	Conductive PVC Covered Panel
Panel Dimensions	600 x 600 mm	600 x 600 mm	600 x 600 mm	600 x 600 mm	600 x 600 mm
Panel Thickness	~ 30 mm	~ 32,5 mm	~ 40 mm	~ 40,5 mm	~ 32,5 mm
Top Surfaces	PVC	PVC	PVC	PVC	Conductive PVC
Bottom Surfaces	Aluminium Foil	Galvanized Steel	Aluminium Foil	Galvanized Steel	Galvanized Steel
Edge Surfaces	PVC Edge Band	PVC Edge Band	PVC Edge Band	PVC Edge Band	PVC Edge Band
Panel Weight	~ 8,50 kg/panel	~ 9,50 kg/panel	~ 10,50 kg/panel	~ 11,50 kg/panel	~ 10 kg/panel
Panel Core	30 mm 610-680 kg/m^3 P2 or P6 class chipboard *(FSC Optional)*	30 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)	38 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)	38 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)	30 mm 610-680 kg/m^3 P2 or P6 class chipboard (FSC Optional)
Fire Reactions	Bfl-s1	Bfl-s1	Bfl-s1	Bfl-s1	Bfl-s1
Panel Load Ratings (According to EN 12825)					
Working Load	1,8 kN	2,4 kN	2,8 kN	3,1 kN	2,4 kN
Maximum Load	>4 kN	>6 kN	>6 kN	>8 kN	>6 kN
Panel Center Load	7109,35	12992,95	10296	18974	
Panel Edge Load	5589	11816	7109	11129	
Panel Corner Load	4757	6422	9806	8144	

HPL Covered Panels

Targa HPL Covered Panels are fabricated using 30 mm / 38 mm P2 or P6 grade Chipboard. Top surface is covered with 1mm HPL, bottom surface is covered with either Aluminium Foil or Galvanized Steel. Sides are covered with PVC edge band. Panels can be installed independently.

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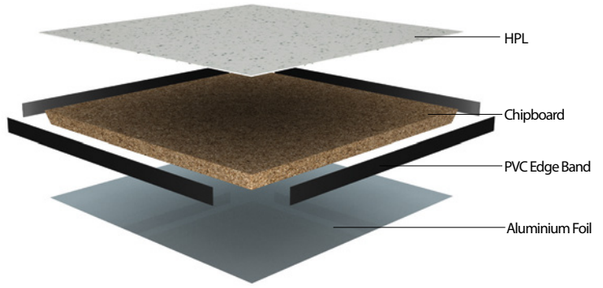
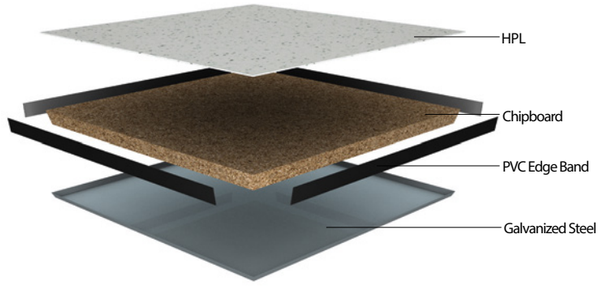
TG / H30 - H38



TG / HT30 - HT38

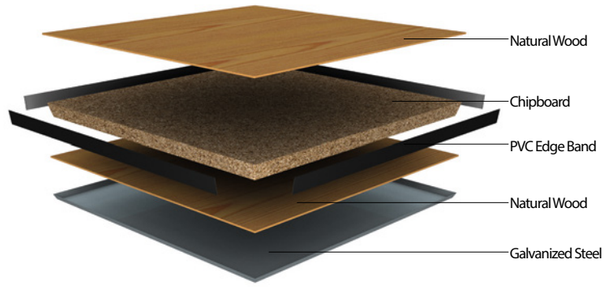


Panel Specifications (HPL Covered Panel)				
Panel Type	**TG / H30**	**TG / HT30**	**TG / H38**	**TG / HT38**
Panel Class	HPL Covered Panel	HPL Covered Panel	HPL Covered Panel	HPL Covered Panel
Panel Dimensions	600 x 600 mm	600 x 600 mm	600 x 600 mm	600 x 600 mm
Panel Thickness	~ 31 mm	~ 31,5 mm	~ 39 mm	~ 39,5 mm
Top Surfaces	Antistatic HPL	Antistatic HPL	Antistatic HPL	Antistatic HPL
Bottom Surfaces	Aluminium Foil	Aluminium Foil	Aluminium Foil	Galvanized Steel
Edge Surfaces	PVC Edge Band	PVC Edge Band	PVC Edge Band	PVC Edge Band
Panel Weight	~ 8,50 kg/panel	~ 9,50 kg/panel	~ 10,00 kg/panel	~ 11,50 kg/panel
Panel Core	30 mm 610-680 kg/m3 P2 or P6 class chipboard (FSC Optional)	30 mm 610-680 kg/m3 P2 or P6 class chipboard (FSC Optional)	38mm 610-680 kg/m3 P2 or P6 class chipboard (FSC Optional)	38 mm 610-680 kg/m3 P2 or P6 class chipboard (FSC Optional)
Fire Reaction	Bfl-s1	Bfl-s1	Bfl-s1	Bfl-s1
Panel Load Ratings (According to EN 12825)				
Working Load	1,8 kN	2,4 kN	2,8 kN	3,1 kN
Maximum Load	>6 kN	>6 kN	>6 kN	>6 kN
Panel Center Load	8923,46	11865	13826	17111
Panel Edge Load	7305	9904	10688	12845
Panel Corner Load	6324	6226	9413	9119

Natural Wood Covered Panels

Targa Natural Wood Covered Panels are fabricated using 30 mm / 38 mm P2 or P6 grade Chipboard. Top and bottom surfaces are covered with natural wood. Sides are covered with PVC edge band. Panels can be installed independently.

TG / WT30



Panel Specifications (Natural Wood Covered Panel)	
Panel Type	**TG / WT30**
Panel Class	Natural Wood Covered Panel
Panel Dimensions	600 x 600 mm
Panel Thickness	~ 37.5 mm
Top Surfaces	Natural Wood
1. Bottom Surfaces	Natural Wood
2. Bottom Surfaces	Galvanized Steel
Edge Surfaces	PVC Edge Band
Panel Weight	~ 10 kg/panel
Panel Core	30 mm 610-680 kg/m3 P2 or P6 class chipboard (FSC Optional)
Fire Reactions	Bfl-s1
Panel Load Ratings (According to EN 12825)	
Working Load	2,4 kN
Maximum Load	≥6 kN

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02

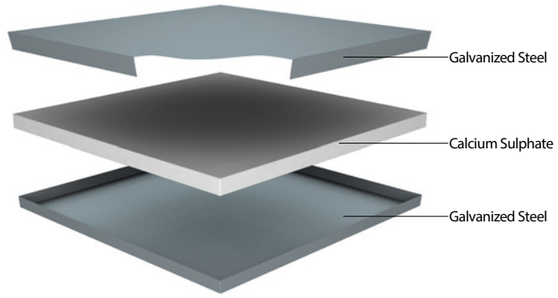
CALCIUM SULPHATE CORE PANELS

- Encapsulated Panels
- PVC Covered Panels
- HPL Covered Panels
- Natural Wood Covered Panels
- Bare Panels

Encapsulated Panels

Targa Encapsulated Panels are completely encased in galvanized steel on the top, bottom, and side surfaces. They are fabricated using 28 mm / 30 mm, 1100 kg/m3 density Calcium Sulphate. Due to the side surfaces being also covered with galvanized steel, Encapsulated Panels provide exceptional moisture, fire and wear resistance. Panels can be installed independently, and are suitable for Carpeting and LVT overlay.

TG / ELCS - EHCS

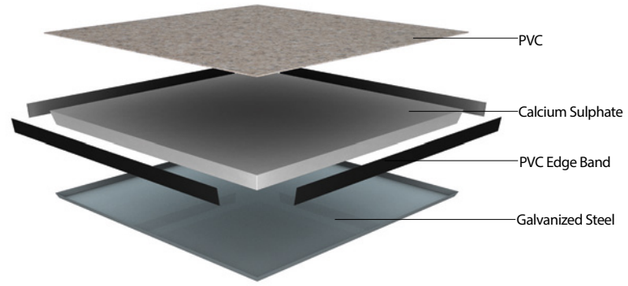


Panel Specifications (Encapsulated Panel)		
Panel Type	**TG / ELCS**	**TG / EHCS**
Panel Class	Encapsulated Panel	Encapsulated Panel
Panel Dimensions	600 x 600 mm	600 x 600 mm
Panel Thickness	~ 29 mm	~ 31 mm
Top Surfaces	Galvanized Steel	Galvanized Steel
Bottom Surfaces	Galvanized Steel	Galvanized Steel
Edge Surfaces	Galvanized Steel	Galvanized Steel
Panel Weight	~ 14,75 kg/panel	~ 16,00 kg/panel
Panel Core	28 mm 1200 kg/m^3 Calcium Sulfate	30 mm 1200 kg/m^3 Calcium Sulfate
Fire Reaction *F*	Afl-s1	Afl-s1
Panel Load Ratings (According to EN 12825)		
Working Load	2,4 kN	3,4 kN
Maximum Load	> 4 kN	> 6 kN
Panel Center Load	9609	17405
Panel Edge Load	5589	10198
Panel Corner Load	4853	6864

PVC Covered Panels

Targa PVC Covered Panels are fabricated using 30 mm, 1200 kg/m3 density Calcium Sulphate. Top surface is covered with PVC, bottom surface is covered with Galvanized Steel. Sides are covered with PVC edge band. If conductive PVC is requested, the panels can be conductive with the insertion of copper rods. Panels can be installed independently.

TG / VTCS30

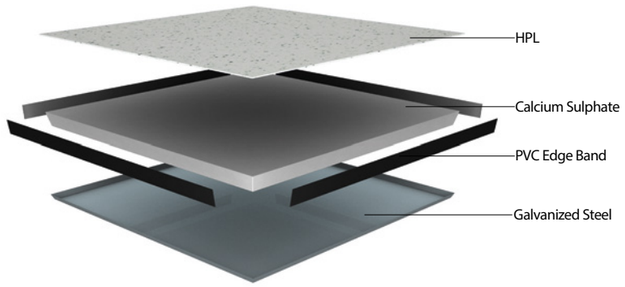


Panel Specifications (PVC Covered Panel)	
Panel Type	**TG / VTCS30**
Panel Class	PVC Covered Panel
Panel Dimensions	600 x 600 mm
Panel Thickness	~ 32.5 mm
Top Surfaces	PVC
Bottom Surfaces	Galvanized Steel
Edge Surfaces	PVC Edge Band
Panel Weight	~ 14,90 kg/panel
Panel Core	30 mm 1200 kg/m^3 Calcium Sulfate
Fire Reaction	Afl-s1
Panel Load Ratings (According to EN 12825)	
Working Load	2,6 kN
Maximum Load	> 4 kN
Panel Center Load	9708
Panel Edge Load	6080
Panel Corner Load	5442

HPL Covered Panels

Targa HPL Covered Panels are fabricated using 30 mm, 1200 kg/m3 density Calcium Sulphate. Top surface is covered with 1mm HPL, bottom surface is covered with either Aluminium Foil or Galvanized Steel. Sides are covered with PVC edge band. Panels can be installed independently.

TG / HTCS30

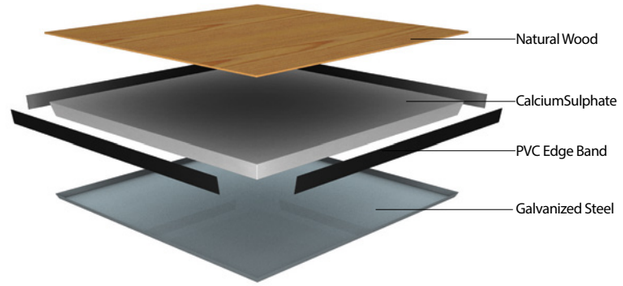


Panel Specifications (HPL Covered Panel)	
Panel Type	**TG / HTCS30**
Panel Class	HPL Covered Panel
Panel Dimensions	600 x 600 mm
Panel Thickness	~ 31.5 mm
Top Surfaces	HPL
Bottom Surfaces	Galvanized Steel
Edge Surfaces	PVC Edge Band
Panel Weight	~ 14,90 kg/panel
Panel Core	30 mm 1200 kg/m³ Calcium Sulfate
Fire Reaction	Afl-s1
Panel Load Ratings (According to EN 12825)	
Working Load	2,6 kN
Maximum Load	> 4 kN
Panel Center Load	10885
Panel Edge Load	7747
Panel Corner Load	5050

Natural Wood Covered Panels

Targa Natural Wood Covered Panels are fabricated using 30 mm, 1200 kg/m3 density Calcium Sulphate. Top surface is covered with natural wood and bottom surface is covered with galvanized steel. Sides are covered with PVC edge band. Panels can be installed independently

TG / WTCS30

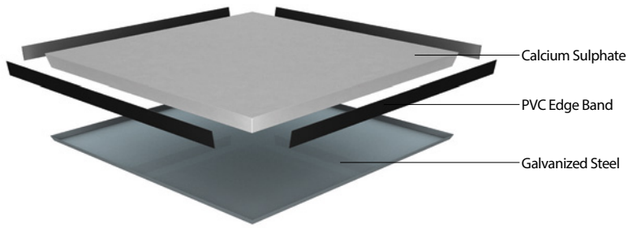


Panel Specifications (Natural Wood Covered Panel)	
Panel Type	**TG / WTCS30**
Panel Class	Natural Wood Covered
Panel Dimensions	600 x 600 mm
Panel Thickness	~ 34 mm
Top Surfaces	Natural Wood
Bottom Surfaces	Galvanized Steel
Edge Surfaces	PVC Edge Band
Panel Weight	~ 15,00 kg/panel
Panel Core	30 mm 1200 kg/m³ Calcium Sulfate
Fire Reaction	Afl-s1
Panel Load Ratings (According to EN 12825)	
Working Load	2,6 kN
Maximum Load	> 4 kN

Bare Panels

Targa Bare Panels are fabricated using 30 mm, 1200 kg/m3 density Calcium Sulphate. Top surface is bare and bottom surface is covered with galvanized steel. Sides are covered with PVC edge band. Panels can be installed independently, and are suitable for Carpeting and LVT overlay.

TG / BTCS30



Panel Specifications (PVC Covered Panel)	
Panel Type	**TG / BTCS30**
Panel Class	Bare Panel
Panel Dimensions	600 x 600 mm
Panel Thickness	~ 30,5 mm
Top Surfaces	Bare
Bottom Surfaces	Galvanized Steel
Edge Surfaces	PVC Edge Band
Panel Weight	~ 13,50 kg/panel
Panel Core	30 mm 1200 kg/m³ Calcium Sulfate
Fire Reactions	Afl-s1
Panel Load Ratings (According to EN 12825)	
Working Load	2,0 kN
Maximum Load	> 4 kN
Panel Center Load	9205
Panel Edge Load	5989
Panel Corner Load	5020

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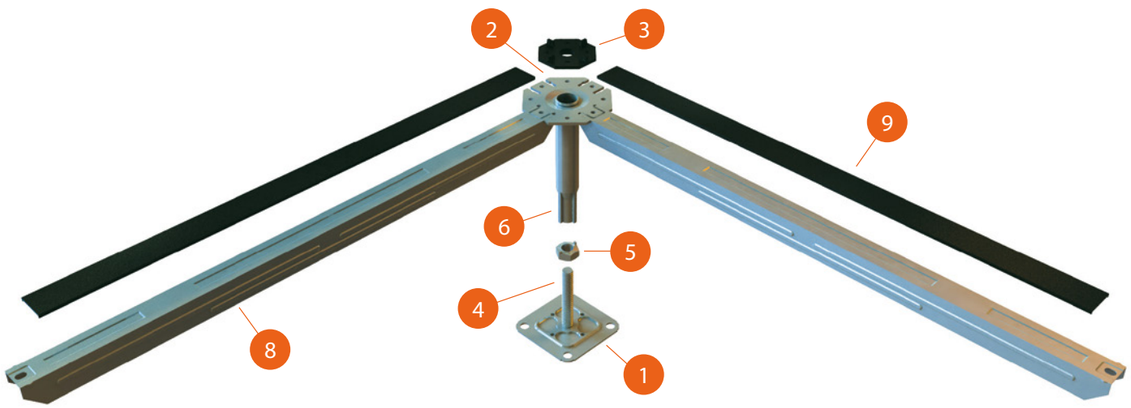
03
SUBSTRUCTURE SYSTEMS

- Pedestal Systems
- Stringer Systems
- Cross-Brace Systems

Substructure Systems

Raised Access Flooring panels are installed on top of zinc coated corrosion resistant pedestals and stringers (where needed). The pedestals are fastened to the concrete slab using a polyurethane based adhesive. Pedestals are available in heights ranging from 5 cm to 100 cm with full adjustability in between. Stringers are to be used for heights over 25 cm and cross-braces are to be used for heights over 80 cm.



	SUBSTRUCTURE SPECIFICTIONS	
1	Pedestal Base	: 90 X 90 mm Galvanized Steel
2	Pedestal Head	: 90 X 90 mm Galvanized Steel
3	Head Gasket	: 3 mm Plastic Gasket
4	Threaded Rod	: M14
5	Nut	: Notched M14
6	Pipe	: 1,5 mm Thick Galvanized Steel, 25,4 mm Diameter
7	Conductive Plate	: For Conductivity, Head Gasket Accessory
8	Stringer	: 0,80 mm Galvanized Steel, 25 x 25 x 25 mm
9	Stringer Gasket	: 2 mm Plastic Gasket
10	Stringer Screw	: Stringer Accessories
11	Cross-Brace	: 5 mm Thick Galvanized Steel Substructure Accessories

PEDESTAL SYSTEMS	MINIMUM HEIGHT WITHOUT PANEL (CM)	MAXIMUM HEIGHT WITHOUT PANEL (CM)
MG 5 - 7 Pedestal Systems	5	7
MG 6 - 9 Pedestal Systems	6	9
MG 8 - 12 Pedestal Systems	8	12
MG 10 - 14 Pedestal Systems	10	14
MG 12 - 17 Pedestal Systems	12	17
MG 15 - 20 Pedestal Systems	15	20
MG 18 - 23 Pedestal Systems	18	23
MG 21 - 26 Pedestal Systems	21	26
MG 24 - 29 Pedestal Systems	24	29
MG 27 - 32 Pedestal Systems	27	32
MG 30 - 35 Pedestal Systems	30	35
MG 33 - 38 Pedestal Systems	33	38
MG 36 - 41 Pedestal Systems	36	41
MG 39 - 44 Pedestal Systems	39	44
MG 42 - 47 Pedestal Systems	42	47
MG 45 - 50 Pedestal Systems	45	50
MG 48 - 53 Pedestal Systems	48	53
MG 51 - 56 Pedestal Systems	51	56
MG 54 - 59 Pedestal Systems	54	59
MG 57 - 62 Pedestal Systems	57	62
MG 60 - 65 Pedestal Systems	60	65
MG 63 - 68 Pedestal Systems	63	68
MG 66 - 71 Pedestal Systems	66	71
MG 69 - 74 Pedestal Systems	69	74
MG 72 - 77 Pedestal Systems	72	77
MG 75 - 80 Pedestal Systems	75	80
MG 78 - 83 Pedestal Systems	78	83
MG 81 - 86 Pedestal Systems	81	86
MG 84 - 89 Pedestal Systems	84	89
MG 87 - 92 Pedestal Systems	87	92
MG 90 - 95 Pedestal Systems	90	95
MG 93 - 98 Pedestal Systems	93	98
MG 96 - 101 Pedestal Systems	96	101

EPD Documentation

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TARGA RAISED FLOOR SYSTEMS

General Information

Aspen Yapı ve Zemin Sistemleri Sanayi ve Ticaret A.Ş.

Programme holder
IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number
EPD-ASP-20160110-CAC1-EN

This Declaration is based on the Product Category Rules:
System floors, 11.2014
(PCR tested and approved by the SVR)

Issue date
14/09/2016

Valid to
13/09/2021

Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)

Dr. Burkhart Lehmann
(Managing Director IBU)

Targa

Owner of the Declaration
Aspen Yapı ve Zemin Sistemleri Sanayi ve Ticaret A.Ş.
Leylak Sokak Murat İş Merkezi B Blok 3/14
34387 Mecidiyeköy / İstanbul

Declared product / Declared unit
Targa / 1 m2

Scope:
Within this study a life cycle analysis (LCA) according to ISO 14040/44 is performed for Targa raised system floor manufactured by Aspen Yapı ve Zemin Sistemleri Sanayi ve Ticaret A.Ş at the production plant in Sakarya, Turkey. The LCA is based on the data declared by the manufacturer. The EPD for Targa raised system floor is an EPD which represents the cradle-to-gate life cycle analysis of the Targa product. The declaration refers to an average product from one plant of one manufacturer. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification
The CEN Norm /EN 15804/ serves as the core PCR
Independent verification of the declaration according to /ISO 14025/
☐ internally ☒ externally

Prof. Dr. Birgit Grahl
(independent verifier appointed by SVR)

Product

Product description
Targa Raised Access Flooring Systems produced by Aspen have been designed to provide the space required for data, power, air conditioning, fire and security infrastructures that have become a necessity for all commercial spaces.
Targa Raised Access Flooring Systems enable a fast and cost-free intervention to the space formed under finishing level with their modular structure and thus render the space functional. It consists of 60 x 60 cm panels freely laying on pedestals, stringers and braces which form the substructure. Panel core can be chipboard or calcium sulfate according to project requirements.

Application
In general, raised floor installation areas are offices, IT rooms, public, commercial and private buildings in order to create cavities/installation space.

Technical Data
Each model of raised access flooring systems has its own technical data.

Constructional data

Name	Value	Unit
System construction (total, FF)	up to 1500	mm
Substructure (from - to)	30 - 1500	mm
Grammage / system weight	20 - 50	kg/m²
Density of the base course	600 - 1600	kg/m³
Break load Statics (/EN 12825/ / /EN 13213/)	min 4000	N
Point load Statics (/EN 12825/ / /EN 13213/)	min 2	kN
Deflection	0 - 4	mm
Fire protection (/EN 13501/DIN 4102/) building material class	B/C	-
Fire protection (/EN 13501/DIN 4102/) Fire resistance	B/C	-
Electrostatics (/DIN EN 1081/)	10000000 - 10000000000	Ω
Working load	1.8 - 3.2	kN
Maximum load	>= 4	kN
Safety factor	2-3	
Panel load class	1-2	

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Panel deflection class	A-C	
Panel dimension class	1	

Base materials / Ancillary materials
ASPEN Targa Raised Access Flooring Systems are primarily made of particle board, steel, PVC and other auxiliary substances. Main raw materials as mass percentage are;

Name	Value	Unit
Chipboard	60	%
Steel	30	%
PVC	5	%
Ancillary Substances	5	%

Reference service life
According to /EN 15084/, the reference service life (RSL) shall only be declared in the EPDs which cover the entire life cycle of a product. The modules declared in this EPD are the production stage information modules from A1 to A3. However, based on the market feedback and the fact that the Targa products which were used in the projects that were carried out 20 years ago have still been well functioning, it can be noted that, unless there is inconformity in the working conditions and maintenance methods, Targa products are expected to be usable for more than 20 years without losing stability and functional properties.

LCA: Calculation rules

Declared Unit
The declared unit is 1 m2 of Targa raised system floor. The average mass of the product is approximately 63 kg. According to the data from the year 2015 of the manufacturer, of 63 kg of mass of the product produced in 2015, 60% is particleboard, 30% is steel sheet, 4% is PVC, 2% is rubber, 1% is glue, and only 0.82% is calcium sulfate. The classification of the *declaration* is 1c, which is *declaration of an average product from one plant of one manufacturer*, based on PCR-A Chapter 5.2.
The average breakdown of the input materials, i.e. raw materials, energy, and water, is based on the normalized percentages of the two alternatives, namely particleboard and calcium sulfate, and is given in a range in the table below. According to this, for the year 2015, 98.6% and 1.4% of the input materials are used by the particleboard and calcium sulfate options, respectively.

Name of component	Particleboard	Calcium sulfate
Raw materials (Mkg)	2.958–3.944	0.42–0.56
Energy (TkWh)	157.76–162.69	2.24–2.31
Water (TL)	78.88–83.81	1.12–1.19

Note: Mkg = million kilograms, TkWh = thousand kilowatt.hours, ML = thousand liters

Declared unit

Name	Value	Unit
Declared unit	1	m²
Grammage (incl. subconstruction)	63	kg/m²

Conversion factor to 1 kg	0.0158	-

System boundary
The type of the EPD: cradle-to-gate
The system boundary includes the production of Targa raised system floor from the extraction of raw materials to the production of finished packaged products at the factory gate - cradle-to-gate.
In this study, the product stage information modules A1, A2, and A3 are considered. These modules include extraction and processing of raw materials, A1; transport of the raw materials to the manufacturer, A2; and manufacturing, including the packaging of the product, A3. As stated by PCR A version 1.5, a potential release of carbon in C4 is to be declared. Therefore, assuming that 90% of particleboard is composed of wood, with the carbon content of 52%, the potential CO2 emission in C4 can be calculated as to be 65.08 kg CO2-equiv., which is caused by the use of wood in particleboard part of the product. The CO2 sequestered in the containerboard used in the packaging has not been included given the negligible mass of the material. The results of the analysis in terms of the mass contributions of all processes to global warming potential are also given in the table below.

Comparability
Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

LCA: Scenarios and additional technical information

The modules A4, A5, B1, B2, B3, B4, B5, Reference Service Life (RSL), B6, B7, and C1-C4 are neither considered nor declared in this study.
Of the weight of the Targa raised system floor product, 1% comprises of the materials used in the packaging of the product. These materials are wooden pallets and cardboard boxes, in which the product is placed. The weight of the pallets is slightly over then 0.10 kg per m2 of product, whereas of cardboard box is slightly less than 0.30 kg per m2 of product.

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LCA: Results

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE				CONSTRUCTION PROCESS STAGE	USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Recuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	MND

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: Targa Ceiling system / 1 m²

Parameter	Unit	A1-A3	C4
Global warming potential	[kg CO2-Eq.]	8.62E+0	6.51E+1
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	3.77E-9	IND
Acidification potential of land and water	[kg SO2-Eq.]	2.99E-1	IND
Eutrophication potential	[kg (PO4)3- Eq.]	3.40E-2	IND
Formation potential of tropospheric ozone photochemical oxidants	[kg ethene Eq.]	4.24E-2	IND
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	3.66E-3	IND
Abiotic depletion potential for fossil resources	[MJ]	1.02E+3	IND

RESULTS OF THE LCA - RESOURCE USE: Targa Ceiling system / 1 m²

Parameter	Unit	A1-A3	C4
Renewable primary energy as energy carrier	[MJ]	4.43E+2	IND
Renewable primary energy resources as material utilization	[MJ]	8.59E+2	IND
Total use of renewable primary energy resources	[MJ]	1.10E+3	IND
Non-renewable primary energy as energy carrier	[MJ]	1.08E+3	IND
Non-renewable primary energy as material utilization	[MJ]	5.17E+1	IND
Total use of non-renewable primary energy resources	[MJ]	1.13E+3	IND
Use of secondary material	[kg]	0.00E+0	IND
Use of renewable secondary fuels	[MJ]	0.00E+0	IND
Use of non-renewable secondary fuels	[MJ]	0.00E+0	IND
Use of net fresh water	[m³]	4.04E-1	IND

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: Targa Ceiling system / 1 m²

Parameter	Unit	A1-A3	C4
Hazardous waste disposed	[kg]	4.09E-6	IND
Non-hazardous waste disposed	[kg]	1.50E+0	IND
Radioactive waste disposed	[kg]	1.77E-2	IND
Components for re-use	[kg]	0.00E+0	IND
Materials for recycling	[kg]	0.00E+0	IND
Materials for energy recovery	[kg]	0.00E+0	IND
Exported electrical energy	[MJ]	0.00E+0	IND
Exported thermal energy	[MJ]	0.00E+0	IND

"Assuming that the product may be incinerated at the end of its life, the biogenic CO2 emissions generated during the incineration is declared in the column C4. Thus, this value of GWP represents the global warming potential including the biogenic carbon from the incineration.

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Publisher
Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany
Tel +49 (0)30 3087748- 0
Fax +49 (0)30 3087748- 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

Programme holder
Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany
Tel +49 (0)30 - 3087748- 0
Fax +49 (0)30 – 3087748 - 29
Mail info@bau-umwelt.com
Web **www.bau-umwelt.com**

Author of the Life Cycle Assessment
Burak Sen
İstiklal Cad Beyoglu Is Merkezi 187/5
34433 Istanbul
Turkey
Tel +902122446780
Fax +902122446780
Mail b.sen@reimers-partners.com
Web **www.reimerspartners.com**

Owner of the Declaration
Aspen Yapı ve Zemin Sistemleri Sanayi ve Ticaret A.Ş.
Leylak Sokak Murat Is Merkezi B Blok 3/14
34387 Mecidiyeköy / Istanbul
Turkey
Tel (0212) 318 88 88
Fax (0212) 275 36 84
Mail info@aspen.com.tr
Web **http://www.aspen.com.tr/**

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TARGA RAISED FLOOR SYSTEMS

Rak 22, 1551 NA Westzaan

T +31 (0) 75 - 612 72 90
F +31 (0) 75 - 670 14 97
E info@integra-groep.com

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