VitrA

Green
Bathroom Solutions

VitrA

We progressively invest in essentially
human spaces - the bathrooms.

The complete bathroom
Exploring physical and emotional needs, VitrA invests in design to produce every essential element in the bathroom.

It's all about inspiration
It all begins with questions posed by the design discipline to understand needs, desires and choices. Designed by VitrA, an extraordinary wealth of attractive combinations help satisfy these needs and desires.

High powered perfection
Seven cutting-edge factories and plants in Turkey and Russia, create sophisticated designs and maintain extremely high standards, whilst progressively reducing VitrA's ecological footprint.

Collaboration with designers
VitrA works with acclaimed industrial designers from around the world. Not only does the collaboration with these top talents improve product functionality, but it also introduces an entirely original range.

VitrA across the world
Bathroom designs greet customers around the world through 2000 sales points in over 75 countries, including 150 exclusive VitrA showrooms in Istanbul, London, Cologne, Moscow, Dubai, Mumbai, Delhi, and other major cities.

Technology lights up the future
The VitrA Innovation Centre serves as the headquarters of the brand's R&D activities with a strong engineering team, leading the bathroom industry with new solutions and technologies.

Improved personal hygiene
VitrA's continuous research into human health introduces new technologies for improved hygiene in the bathroom. These solutions raise the personal hygiene experience to a new level.

A pledge to the future
VitrA embraces Blue Life, a set of guidelines devised to mitigate our impact on the environment, and is held as a production, design and management philosophy.

“Work in harmony with nature, love nature, stay with nature. It will never mislead you.”

Frank Lloyd Wright

Dear partner,

The bathroom solutions we have developed in accordance with our sustainable management, production and design approach, Blue Life, continue to add value to your projects.

By taking responsibility to protect our natural resources, VitrA and Artema are leading the way for architects and engineers who aim to design sustainable buildings with better solutions for bathrooms, which is the area where water is used the most. In our green building projects, which are evaluated by LEED, BREEAM and DGNB certifications, we are increasing our score across their production categories through our use of ceramic health tools, complementary products and, mixers and shower systems.

We can build a sustainable life together. Because the future of our blue planet is our reponsibility.

Regards,
Eczacıbaşı Building Products

Eco-friendly buildings, eco-friendly products and water efficiency

Başak Erik
Sustainability Consultant
ERKE Sustainable Building Design and Consultancy

Sustainability

Sustainability is a term that has been commonly used since global climate change became a critical issue. To minimise any environmental damage caused by the construction industry and to preserve our natural resources, we recommend specific practices and solutions to prevent or lessen such impacts through our environmental approach. Acceptance and application of these practices by manufacturers is crucial. Within this context, sustainability efforts developed for management, production and products by manufacturers are gaining importance.

Green building certification system

One of the standards that has gained popularity in the construction sector is the green building rating system. The most widely used of these certification systems developed by countries are LEED in the U.S.A., BREEAM in the UK and DGNB in Germany. First of all, it is important to define the term “green building”.

The concept of a “green building” requires an integrated design process for each development that is environmentally responsible and that uses resources efficiently during its whole lifecycle – from its location and design to its construction, administration, maintenance, renovation and demolition. While evaluation factors vary across different green building certification systems, they share the same fundamental goal. That goal is to design buildings and their surroundings in a way which reduces their overall impact on human health and the natural environment. Architects and construction professionals play a key role in achieving this goal.

The benefits of green building certification

There are many reasons to define a project as “green”. Here are some key reasons:

- Green building certification encourages the introduction and development of sustainable construction for clients, project owners, designers and occupants.
- With green building applications and insulation systems,

heating and cooling costs can be reduced, and carbon dioxide and many harmful emissions can be minimized.

- Green buildings give the opportunity to benefit from solar energy, provide water efficiency and increase indoor air quality.

When all these factors are applied it is clear to see the value of the building increases, the rate of return on investments increases for investors, and all this contributes to the company's prestige and customer loyalty, social responsibility and brand awareness. So, where do we start and what steps do we follow after deciding the project will be a green building?

The application process

Taking LEED, the most widely used green building certification in the world as an example, we begin by determining the project shareholders. Depending on the project's features, the appropriate application category is then chosen. In this context, a commonly asked question is, "Are the green building practices only applicable to new building projects?" Green building practices are not just applicable for new buildings but also interior developments and larger scale projects, such as a campus. After the project type is determined, a pre-assessment takes place to define the LEED goals and the project is registered on the LEED Online system for LEED to action. Upon completion of all LEED documentation, the process then begins with design.

Depending on the project's status, the design and construction stages can be carried out simultaneously or in sequence. Pre-conditional requirements and loans, that are all factored-in by LEED, are sent to USBGC (US Green Building Council) for evaluation.

Once the evaluation process is complete, the project's certification level is determined according to the points it earned and the LEED certification process is completed. Certificates are sent to the project owners after these stages are completed. From general to specific, the topics followed through the project include choosing the location, sustainable land, water efficiency, efficient use of materials and energy, indoor air quality and innovation.

Conceptual differences

As energy, water and waste issues are now considered more commonly in the world, the number of green buildings in our country is increasing day by day. In parallel with the increase of green buildings, we see there is a conceptual confusion.

As consultants, we can easily say that the most confusing term and concept for people is "Products having LEED/BREEAM/DGNB certificates". These certificates are those that can only be obtained at a campus or a building scale. Therefore, a more appropriate definition here would be "certificates suitable for green buildings." This is completely related to product sustainability, which is a subcomponent of a green building.

For product sustainability, there are indeed certificates that contribute points to green buildings. If we list these certificates; The Environmental Product Declarations (EPDs), in which the manufacturers declare the effects on the environment in a transparent manner, the European Unified Water Label, which presents the water consumption values of the luminaire to the user, and the statement of the emission tests conducted in order to increase the indoor air quality.

To define buildings as "green", it should be noted that the environmental performance and emission of materials used are just as important as how they are implemented during the construction process. Architects and other construction professionals are expected to choose materials in light of these criteria.

The use of certified products contributes to projects where green building certifications (LEED, BREEAM, DGNB) are followed, thanks to various environmental and healthy product features, at different score levels.

In the construction industry, all green building rating systems encourage manufacturers to declare their environmental impact transparently. This “Environment Product Declaration” (EPD) is based on life cycle analysis. In other words, it is a system that analyses the environmental impacts of phases related to the extraction of raw materials, their transportation, production, packaging and even disposal. Environment Product Declarations (EPDs) are documents for manufacturers, valid and recognised worldwide, approved by independent validating institutions named as third parties. Using construction products with EPDs, increases the points awarded by green certification systems.

We spend 90% of our lives indoors, so it has become clear that indoor air quality is an important criterion in terms of human health, comfort and efficiency. The chemicals emitted by construction materials used indoors evaporate at room temperature polluting the air, which can cause harmful effects for both the occupants of the building and the environment. Using construction materials with low values of VOC (Volatile Organic Compound) is one of our strategies to improve indoor air quality in buildings.

Water efficiency

Water efficiency is one of the major factors evaluated in green buildings. To ensure efficient use of water, occupants are expected to know how much water they consume in all areas. For example, when the amount of water consumed in a building is calculated, it can be seen that the water used in bathrooms and toilets comprises 70% of the total water consumed. Studies show that toilets take the lead by accounting for 30% of the total water consumed, followed by showers and taps. Therefore, benefiting from energy and water-efficient health tools is essential for using the world's resources in a more sustainable way.

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Sustainability at VitrA and Artema

Sustainability is a term that has been commonly used since the global climate change became an issue. To minimise the environmental damage of the construction industry and to preserve natural resources, applications and solutions to prevent these issues have been suggested through various environmental approaches. Whether or not these applications are embraced and followed by the manufacturers is the most crucial issue.

Embracing sustainability as a business approach, VitrA and Artema develop practices and solutions that will prevent existing and potential problems through environmental approaches in order to minimize environmental damage and protect natural resources. Having turned its practices into a corporate mission by signing the Global Compact in 2006, Eczacıbaşı Building Products strives to improve its ongoing facilities in accordance with the UN Sustainable Development Goals.

Sustainability in design

Eczacıbaşı Building Products' responsibility to preserve natural resources begins with the design of products offered for houses and common areas. Vitra and Artema's design approach is about decreasing the amount of water used in products developed, such as urinals, toilets, taps and mixers, therefore saving fresh water used per person, power consumption and cutting down on carbon emissions. The products designed with this approach have received world-renowned awards such as iF Design, Plus X Design and Good Design.

Sustainability in production

With technological investments promoting more mindful use and recycling of raw materials, Eczacıbaşı Building Products also pursues its responsibility to preserve natural resources at the production stage. The projects carried out with this approach achieve national and international success, receiving awards from the Istanbul Chamber of Industry (ISO), the Kocaeli Chamber of Industry (KSO) and the Turkish Green Building Council (CEDBIK) along with European Union Environment Awards and the European Business Award for the Environment.

Blue Life

For our blue planet...

Sustainability in administration

VitrA and Artema are considered to be pioneers of the future on UN Global Compact and non-governmental volunteering platforms such as the Business Council for Sustainable Development in Turkey. They are board members of international platforms such as the European Federation of Ceramic Sanitaryware Manufacturers (FECS), the European Ceramic Industry Association (Cerameunie) and Bathroom Manufacturers (BMA). Eczacıbaşı Building Products retains its leading position also in sustainability as a member of the Turkish Ceramics Federation (SERFED) and the Association of Construction Material Producers (IMSAD).

Green buildings

Built in harmony with nature to make life on Earth more sustainable, green buildings are designed with a cradle to cradle approach. These buildings are considered carefully as constructions that are sensitive to people, the environment and its occupants, and use resources efficiently during their entire life cycle – from location, planning, design and construction to administration, maintenance, renovation and even demolition or recycling.

Green buildings are designed using three basic systems: These are structures that are sensitive to ecosystems, are budget-friendly and consider the health and comfort of their occupants. They are also made with a responsible approach, considering social and environmental climate data and local conditions. These structures, which use natural and renewable energy resources and do not generate any waste, are environmentally friendly. Economical and healthy buildings that are oriented towards energy-saving and renewable resources, where materials with low environmental effects are selected, and that provide water efficiency.

This approach passes responsibility on to service providers in the construction materials industry to inform and guide customers on various subjects, from material choice to kitchen and bathroom equipment, isolation, ventilation and waste management.

Green buildings and construction products

Materials used in green buildings are designed to perform at higher levels than legal regulations and industry standards. Therefore, the quality of the buildings, power efficiency, water conservation, eco-sensitivity and indoor quality all increase while their environmental footprint decreases. The main goals of green buildings are to decrease water footprint and protect water quality. Toilets that use less water, urinals ensuring hygiene without wasting water, auto-clean washbasins, and taps and mixers saving water can all be seen as examples for construction products that enable water efficiency.

It is also important that the construction products used in green buildings maintain sustainable qualities or hold environment certificates. It is recommended that all supplies are procured from companies that favour social sustainability concerns such as employee health and safety, human rights and endangered natural resources. Construction products should be selected in a way that does not endanger the user's health throughout the product life cycle.

Green building certifications

Due to specific requirements, many countries have developed standards for green buildings. Among them, LEED (Leadership in Energy and Environmental Design), which is the most popular internationally, sets out environmental sustainable design, construction and operation criteria at the building and urban scale. Another rating system, BREEAM, was founded in the UK and has developed international standards for other countries as well. As the world accelerated to embrace the concept of sustainability, Germany, a country where quality is a priority, developed a certificate system named DGNB (Deutsche Gesellschaft für Nachhaltiges Bauen E. V.).

VitrA and Artema offer solutions in a range of categories for internationally accepted LEED, BREEAM and DGNB certifications.

They aim to:

- Decrease each building's negative impacts on nature and help those buildings to be recognised for their environmental benefits
- Offer a reliable and environmentally-friendly label for them
- Meet even higher standards than those required by the regulations
- Raise awareness for the benefits of buildings with lower negative environmental impacts among property owners, occupants, designers and businesses, and to encourage demand
- Inspire the market to create innovative solutions to minimise the environmental impacts of all buildings.

LEED

Developed in 1998 by the U.S. Green Building Council, LEED (Leadership in Energy and Environmental Design) is a globally valid certificate which evaluates buildings' environmental impacts. LEED green building certification programme is a rating system developed to evaluate buildings that are designed, constructed and managed with an infrastructure that is eco-sensitive and of good quality in terms of human health.

Suitable for all types of buildings, LEED standards are taken into account in 9 categories: Integrated process management, location and transportation, sustainable lands, water efficiency, energy and atmosphere, materials and resources, indoor life quality, innovation and regional priority. Depending on the total points earned from credits applied for each of these 9 categories, buildings are granted LEED certificates in Platinum, Gold, Silver and Certified levels.

LEED certificate levels

	New buildings BD+C: NC		Indoors ID+C:		Current buildings O+M	
	v4	v4.1	v4	v4.1	v4	v4.1
Integrated process management	1	1	2	2	-	-
Location and transportation	16	16	18	18	15	14
Sustainable land	10	10	-	-	10	4
Water efficiency	11	11	12	12	12	15
Energy and atmosphere	33	33	38	38	38	35
Materials and resources	13	13	13	13	8	9
Quality of indoor life	16	16	17	17	17	22
Innovation	6	6	6	6	6	1
Regional priority	4	4	4	4	4	-

LEED with VitrA and Artema products

VitrA and Artema offer smart solutions to help earn points for water efficiency, materials and resources, quality of indoor life and innovation categories under LEED certification system.

Water efficiency

Eczacıbaşı Building Products aims to provide consumers with sustainable solutions, offering complete bathroom solutions and certified products designed to decrease the amount of water used in common areas and houses. For "decreasing the amount of water used indoors" credits, VitrA and Artema, contribute to point scoring with up to 6 points in new buildings, 12 points in indoor projects and 15 points in current buildings.

Water efficiency
6 points

Materials and resources

Eczacıbaşı Building Products contributes to earning up to 2 points for the "Environmental Product Declarations" category as it provides an Environmental Product Declaration (EPD) revealing environmental impacts caused during production processes through "life cycle analysis". Furthermore, as it is accepted as a local producer in many markets for product solutions, it also earns up to 2 points for "Raw material resources" credits.

Materials and resources
4 points

Innovation

With their innovative technologies and design, most of the products made by Eczacıbaşı Building Products earn 1 point in the "innovation" category. Their innovative solutions include an economical toilet, the first toilet in the world to be approved by the German Standards Institute LGA, which can optionally operate with 2.5/4 litres of water, waterless urinals and specially designed wall-hung toilets used with 2.5/4-litre concealed cisterns. With these product groups, it provides 50% efficiency in reservoirs and urinals according to LEED's base water consumption values, contributing 1 point for innovation in "Sustainable Waste Water Management".

Innovation
1 points

BREEAM

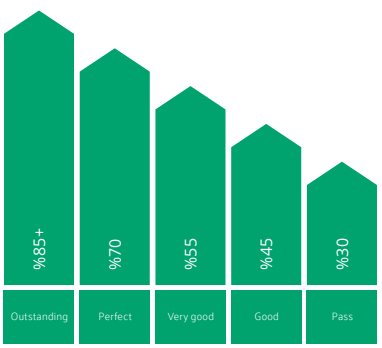
The UK-based BREEAM (Building Research Establishment Environmental Assessment Method) system formed the basis for a number of green building certifications, by evaluating constructions' sustainability for the first time in the world in 1990. It became an effective measure for defining the environmental performance of buildings, determining best practice standards for sustainable architecture.

BREEAM's standard includes 10 sustainability categories. Administration, well- being and comfort, energy, transportation, water, materials, waste, use of land and ecology, pollution and innovativeness. For these categories, the points vary depending on different types of constructions such as shopping malls, industrial buildings and houses and on different locations such as Europe, the UK or Gulf Region. BREEAM evaluates each building's performance based on design, construction, supply and operation processes. Credits are earned in 10 categories depending on the performance and then summed up to create a total score as "Pass", "Good", "Very Good", "Excellent" or "Outstanding".

BREEAM®

BREEAM rating table for 10 categories

	Credits to earn	Division percentage
Administration	20	12
Health and comfort	21	14
Energy	34	19
Transportation	11	8
Water	9	6
Materials	14	12,5
Waste	13	7,5
Use of land and ecology	5	10
Pollution	7	6,5
Innovativeness	10	10



BREEAM rating

BREEAM with VitrA and Artema products

VitrA and Artema offer smart solutions to help earn points for health and comfort and water and materials categories in the BREEAM certification.

Health and comfort
Eczacıbaşı Building Products creates a healthy indoor environment by lowering the oscillation of volatile organic compounds in furniture solutions, contributing to 1 credit points being earned for the "Indoor Air Quality" category.

Volatile organic compounds
1 credit

Water
Eczacıbaşı Building Products aims to provide clients with sustainable solutions, by offering certified products designed to decrease the amount of water used in common areas and houses. VitrA and Artema promote the use of taps and mixers that consumer less water, lowering hygiene-based water waste and earning up to 6 credit points in the "water consumption" category.

Economical WC, the first toilet in the world to be approved by the German Standards Institute LGA, can optionally operate with 2.5/4 litres of water, waterless urinals and specially designed wall-hung toilets using 2.5/4- litre concealed cisterns are just some examples of these innovative solutions.

Taps and mixers include innovative hand showers and other solutions that save more water and energy using special aerators and cartridges.

Water consumption
4 credit

Materials
Eczacıbaşı Building Products promotes the use of materials efficiently in all production processes. The company is recognised as a local supplier in numerous markets for product solutions. VitrA and Artema only use building products that have a reduced environmental impact during the building's life cycle and only choose materials made responsibly for fundamental elements of the construction. Consequently, they earn 1 credit point for their "Environmental Product Declaration".

Responsible consumption of materials
1 credit

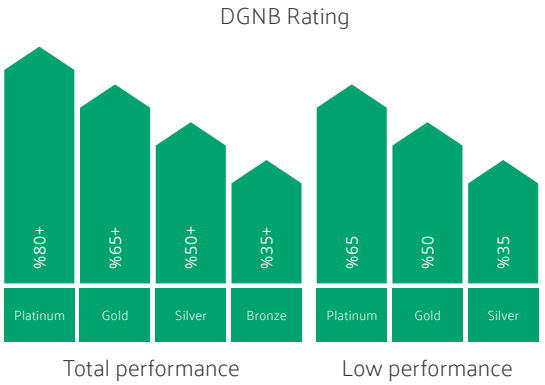
DGNB

DGNB (Deutsche Gessellschaft für Nachhaltiges Bauen) is a quality-driven system developed in collaboration between the German Sustainable Building Council and the Ministry of Transport, Building and Urban Affairs with an aim to plan and evaluate buildings.

DGNB has built a sustainability system based on a cradle to cradle approach. Bearing in mind its six main categories defined as economy, land, environment, management, technique and social culture with the lifecycle of the building, this evaluation system checks all strategies covering every stages the building from design to deconstruction and even reuse. DGNB's system stands out by prioritising quality in comparison to other standards.

DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen
German Sustainable Building Council

Main category	Category points	Category percentage
Environmental feature	19	22.5
Economy	9	22.5
Equality in social culture and functionality	22	22.5
Technical quality	24	15
Administration quality	23	12.5
Selection of the land	9	5



DGNB with VitrA and Artema products

Eczacıbaşı Building Products offer smart solutions that help score points for the environmental feature category in the DGNB certification system.

Environmental feature
Eczacıbaşı Building Products earn up to 3 points during the building's life cycle in the "impact on local environment" category within the DGNB certification system, by using building materials with lower environmental impacts. By promoting the use of taps and mixers that use less water to decrease overall consumption, they also contribute up to 2 points towards the "drinking water demand and water waste volume" category.

Impact on local environment
3 points

Drinking water demand and water waste volume
2 points

Quality approach at VitrA and Artema

Embracing holistic quality as a tool to make a difference and prioritising quality at all stages, Eczacıbaşı Building Products view customer centricity and motivation as part of its main goals. The company embraces process management aiming to lead the way for a modern, high-quality and healthy life for continuous development, quality-driven decision-making and practices and overall service quality as its corporate policy.

Having embraced Holistic Quality Management in 1993, Eczacıbaşı Building Materials holds the first quality management system certification for ceramics, taps and mixtures in Turkey. Seeing holistic quality as a tool to achieve creativity and innovation, the company made it to the finals in the competition organised by the European Foundation for Quality Management in 1999. In 2000, it became the first ceramic sanitaryware materials producer to be granted an award in Europe by EFQM. Between 2013-2017, VitrA Innovation Centre was selected five consecutive times as the best R&D centre in the refractory and ceramics industry.

Certificates and awards

2018
- 76-250 Best R&D Centre employing R&D staff

2017
- VitrA Innovation Centre was selected as Turkey's best R&D centre

2015
- First furniture manufacturer granted with EPD (Environmental Product Declaration)

2014
- 3. International Green Buildings Summit, Sustainability Encouragement Award
- CEVKO Foundation Green Dot Awards - Large Scale Enterprises Category Encouragement Award
- VitrA Innovation Centre, Ministry of Science, Industry and Technology Efficiency Week, Efficient Project Award
- Kocaeli Chamber of Commerce, Şahabettin Bilgisu Environment Awards, Large Scale Enterprises, Winner of Stone-Soil Industry category
- European Union Environment Awards – Turkey Programme, Winner of Administration Category with Blue Life holistic sustainability system
- Turkey's first company to win the EU Business Awards for the Environment
- First producer to achieve the Turkish Standards Institution's Double Star Certificate in all industries and the only producer to achieve it in the taps and mixers industry
- First taps and mixers brand to be granted TS ISO 50001 Energy Management System Certificate in Turkey

2013
- First taps and mixers producer in Turkey to be granted the European Water Label
- First taps and mixers producer in Turkey to be granted the EPD Type III Environmental Product Certificate
- First Green Bathroom Solutions Catalogue in its industry across Turkey
- OHSAS 18001 Workplace Safety Management System Certificate for our taps and mixers production facilities

2012
- First ceramics sanitaryware producer in the world to be granted the EPD Type III Environmental Product Declaration Certificate

2010
Awarded Turkey's first TS ISO 50001 Energy Management System Certificate in ceramics industry

2008
- OHSAS 18001 Workplace Safety Management System Certifificate for our ceramics sanitaryware production facilities

1999
- ISO 14001 Environment Management System Certificate awarded for only the second time in the world in the taps and mixers industry, the first time in Turkey

1998
- World's second ISO 14001 Environment Management System Certificate to be awarded in the ceramics industry, the first time in Turkey

1993
- First ISO 9001 Quality Management System Certificate to be awarded in Turkey for ceramics, taps and mixers


VitrA

VitrA Innovation Centre

Searching, designing, developing and producing new materials, processes and technologies, VitrA Innovation Centre carries out innovations to decrease the footprint of green buildings and to inspire end users to save more natural resources. Aiming to enrich and increase innovative ideas by following advancements in the world and from our company's internal suggestions, the centre explores nano technology, electronics, water and energy, sensor technology, acoustics, ergonomics and composite materials. With innovation practices focusing on the user and technology, it brings current innovations to life.

For a sustainable world, the VitrA Innovation Centre offers eco-innovative products at the intersection of sustainability and innovation, aiming to fulfill needs that haven't yet been met and make current products and services even more useful and functional.

Eco-innovation examples from VitrA Innovation Centre

Taps, mixtures and shower systems

Water saving opportunity by flowing cold water instead of warm with a cartridge capable of moving 90° left, when taps and mixers are in the central position.
BluEco

Water saving control function that enables high flow rate to be achieved consciously.
BlueStep

Taps and mixers that see the user.
AquaSee

Flow regulator that turns the direction of the water to save water.

Mixer that knows when to stop.
AquaTouch

Mixers with heat and flow rate control.

Thermostatic mixers that control the water temperature at the desired temperature.
AquaHeat

Shower system designs that save water.

Ceramic sanitaryware

Surface insulation that prevents the growth of harmful bacteria.
VitrA Hygiene

The first 2.4/5 L toilet in the world.

Washbasins, toilets and urinals with detergent reserves provide increased hygiene for every wash and prevent limescale and odour.
VitrA Fresh

VitrA urinal with touch-free washing system.

Rimless toilet that discourage germ reproduction.
VitrA Rim-ex

Splash-free urinal.

Design that leaves no room for dirt.
VitrA Concealed Installation

Urinal that provides hygiene without wasting any water.

Dirt and dirty water-resistant surface.
VitrA Clean

Green and healthy product certificates

The green and healthy nature of a building depends on the environmental performance and emission of materials used as well as how they are implemented during the construction process. Products designed by VitrA and Artema with Blue Life approach contribute to projects with valid green building certifications (LEED, BREEAM, DGNB) with various environmental and healthy features.

Life Cycle Analysis (LCA) stands out in environmental products. In LCA studies, the environmental impacts of different stages of the life cycle, starting from the acquisition of raw materials used in the production of a product or service, including all relevant production, shipment, consumer use and post-use waste disposal, are identified and reported.

The Environmental Product Declaration is a validation tool that declares the product has a transparent production process in terms of protecting the environment. Another evaluation factor in green buildings is that the product should not contain hazardous chemical.

Documents that VitrA and Artema have created with these goals, add points/credits for LEED, BREEAM and DGNB certifications.

Environmental product declarations
Eczacıbaşı Building Products declares that it has environmentally transparent production processes, evaluated according to categories defined within the scope of ISO 14040. It holds an Environmental Product Declaration (Type III) of German Institute of Construction and Environment, a validation organisation named as a third party for all ceramic sanitaryware, taps, mixers and bathroom furniture (with IBU's support). With this document, it inspires the development of product sustainability and helps consumers to decide more consciously which products they purchase.

Unified Water Label
Holding a Unified Water Label, Artema contacts its clients directly by using a label showing the water consumption like the labels showing power consumption. This certificate, which was granted to a Turkish brand for the first time, is labelled on Artema products, showing the user the water consumption of the taps and mixers.

Indoor air quality
Chemical emission from materials used indoors is one of the major factors affecting indoor air quality. Eczacıbaşı Construction Products cares for consumers' health, using products that don't pose a risk of cancer or allergies such as asthma. Products produced that consider formaldehyde levels are called E1, E2 and E3. The Formaldehyde category accepted in European Union countries is E3 which has minimal effects on human health. Eczacıbaşı Building Products uses these E1 level products when required, avoiding potential health problems.

Exemplary projects

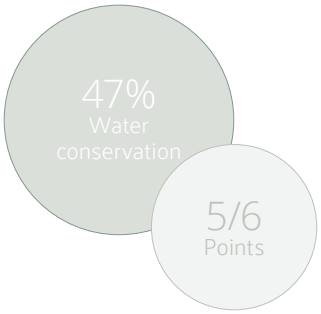
Rönesans Tower Office Building

At the Rönesans Office Building with LEED v3 Platinum certificate, water consumption decreased by a percentage of 47% compared to standard values taken as base at LEED, thanks to VitrA's product choices. Therefore it can earn 5 points out of 6 from LEED v-v 4. 1.

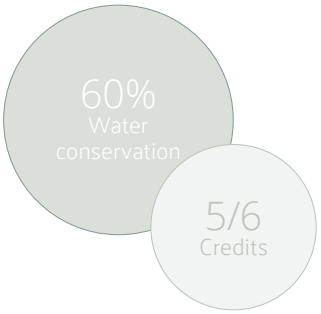
As a result of "BREEAM International 2018 Water Conservation Evaluation", it was seen that the water consumption can be decreased by 60% compared to standard values taken as base at BREEAM by using VitrA products. Therefore the project can earn 5 credits out of 6 for BREEAM International 2018.

Toilet	2.5-4 L
Washbasin mixer	1.3 L / min.
Hand shower set	6 L / min.
Urinal	1 L

Design grade according to LEED standards



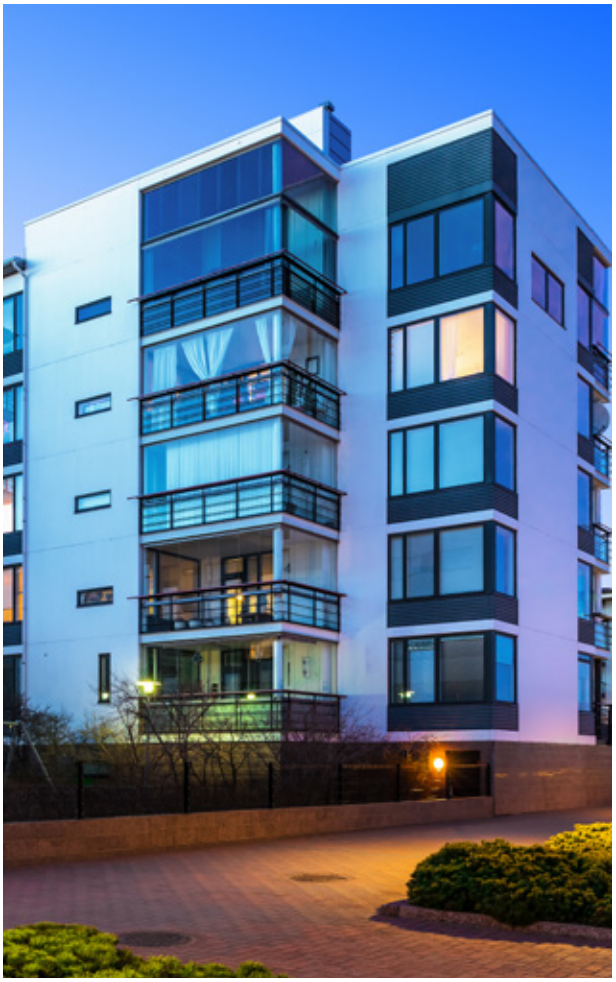
Design grade according to BREEAM standards



Project example of a house for a family of four

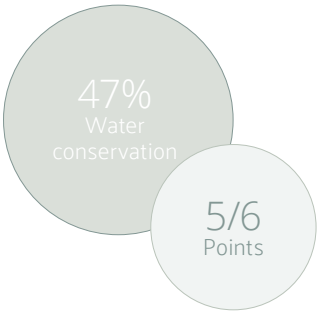
In a house where a family of up to four members live, 42% of water conservation can be achieved according to LEED base values when VitrA products are used and therefore four points can be achieved out of four for LEED v-v 4.1.

When the same house is evaluated according to BREEAM International 2018, it was seen that water consumption was 40% less when compared to standard values taken as base at BREEAM. This way, 3 credits out of 6 can be earned within the scope of BREEAM International 2018.

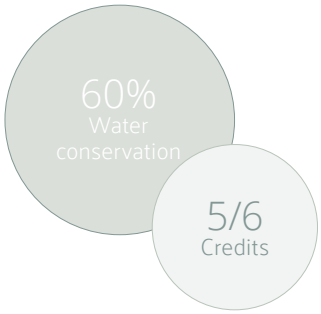


Toilet	Plural: 2,5-4 L
Washbasin mixer	Origin: 5 L / min
Mixer tap	Juno: 5 L / min
Hand shower set	Slim 3F: 6 L

Design grade according to LEED standards



Design grade according to BREEAM standards



Ceramic sanitaryware and complementary products

The table below includes ceramic sanitaryware and complementary products, classified by LEED, BREEM and DGNB categories.

LEED v4-v4.1 category		Recommended products	Potential points
Water efficiency	Decrease in water consumption	Waterless urinals, 2.5/4 L toilets and concealed cisterns.	1 - 6
Materials and resources	Environmental product declarations	All urinals, toilets and concealed cisterns are included within the price list.	1 - 2
	Raw material resources		
Innovation	Innovation	Waterless urinals, 2.5/4 L toilets and concealed cisterns.	1
BREEAM category		**Recommended products**	**Potential points**
Water	Water consumption	Waterless urinals, 2.5/4 L toilets and concealed cisterns.	1 - 4
Materials	Supplying materials responsibly	All urinals, toilets and concealed cisterns are included within the price list.	1 - 3
DGNB category		**Recommended products**	**Potential points**
Environmental feature	Impact on local environment	All urinals, toilets and concealed cisterns are included within the price list.	1 - 3
	Drinking water demand and water waste volume	Waterless urinals, 2.5/4 L toilets and concealed cisterns.	1 - 2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Taps, mixers and shower systems

The table below includes taps, mixers and shower systems, classified by LEED, BREEAM and DGNB categories.

LEED v4-v4.1 category		Recommended products	Potential points
Water efficiency	Decrease in water consumption	Cisterns, max. 2.5-4 L / flush. Urinals, max. 1 L / flush. Wash basin mixers, max. 5 L / min. at houses, max. 1.3 lt / min. at offices. Kitchen sink mixers, max. 5 L / min. Shower heads, max. 6 L / min.	1 - 6
Materials and resources	Environmental product declarations	All taps and mixers included in the price list.	1 - 2
	Raw material resources		
Innovation	Innovation	Wash basin mixers; max. 1.3 lt / min. Shower heads, max. 6 L / min.	1
BREEAM category		**Recommended products**	**Potential points**
Water	Water consumption	Cisterns, max. 2.5-4 L / flush. Urinals, max. 1 L / flush. Wash basin mixers, max. 5 L / min. at houses, max. 1.3 lt / min. at offices. Kitchen sink mixers, max. 5 L / min. Shower heads, max. 6 L / min.	1 - 4
Materials	Supplying materials responsibly	All taps and mixers included in the price list.	1 - 3
DGNB Category		**Recommended products**	**Potential points**
Environmental feature	Impact on local environment	All taps and mixers are included within the price list.	1 - 3
	Drinking water demand and water waste volume	Cisterns, max. 2.5-4 L / flush. Urinals, max. 1 L / flush. Wash basin mixers, max. 5 L / min. at houses, max. 1.3 lt / min. at offices. Kitchen sink mixers, max. 5 L / min. Shower heads, max. 6 L / min.	1 - 2


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