

TOTO®

Ultra High Efficiency Urinal, 0.125 GPF UT445U(V)

The Commercial Ultra High Efficiency urinal delivers TOTO's leadership in innovations and performance to your commercial space. This model is designed to work with the TOTO Ultra High-Efficiency EcoPower® Flush Valves, which feature low water consumption and integral trap.



Performance dashboard

Features & functionality

Ultra High efficiency, 0.125 GPF / 0.47 LPF, flushometer urinal

Washout urinal with integral trap

Design for use with TOTO ultra low-flow EcoPower® flushometer valve

Stainless steel urinal drain cover included

ADA compliant

Visit TOTO for more product specifications:
Ultra High Efficiency Urinal, 0.125 GPF, UT445U(V)

Environment & materials

Improved by:

Saves 87% and 75% more water than standard 1.0 GPF and 0.5 GPF urinals

Certification & rating systems:

Contributes to earning credits in LEED®

CALGreen® compliant

Declare™ label, LBC Red list free

MasterFormat® 22 42 13

[See LCA, interpretation & rating systems](#)

[See materials, interpretation & rating systems](#)



SM Transparency Report (EPD)™ + Material Health Overview™

EPD LCA

3rd-party reviewed ✓

Transparency Report (EPD)

3rd-party verified ✓

Validity: 06/24/2024 – 06/24/2029
TOTO – 20240624 – 004

MATERIAL HEALTH Material evaluation

Self-declared ✓

This environmental product declaration (EPD) was externally verified by Jack Geibig (Ecoform) on behalf of NSF according to ISO 14044; ISO 21930:2017; SM Part A: LCA calculation rules and report requirements, 2023; SM Part B: Commercial Urinals; and ISO 14025:2006.

In accordance with ISO 14044 and the referenced PCR, the life cycle assessment was conducted by Sustainable Minds and critically reviewed by Jack Geibig (Ecoform) on behalf of NSF.

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SUMMARY

Reference PCR
SM Part B: Commercial urinals, v3.0

Regions; system boundaries
North America; Cradle-to-grave

Functional unit
One commercial urinal in an average commercial environment

LCIA methodology; LCA software; LCI database
TRACI 2.1; SimaPro Analyst 9.5; ecoinvent and USLCI databases

Public LCA
LCA background report of TOTO sanitary ceramic products - Urinal UT105 & UT445, 2024

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[Contact us](#)

LCA results & interpretation

Urinal UT445U

LCA results & interpretation

EPD additional content

Material health

Scope and summary

- Cradle to gate Cradle to gate with options Cradle to grave

Functional unit

One commercial urinal in an average commercial environment. The expected service life (ESL) of a building is 75 years, and all use stage activity and impacts are accounted for in that full ESL period. The reference service life (RSL) of the urinal is 30 years, which is an industry-accepted average lifespan based on the economic lifespan of the product.

Maintenance

Regular cleaning is assumed to use 1.69 fl oz (50mL) of a 1% sodium lauryl sulfate (SLS) solution daily for 75 years, which is building estimated service life. The use of 50mL/day over 260days/year for 75 years gives a total of 975L of solution. Using a density of 1.01kg/L for a 1% SLS solution, 985kg of solution will be needed over the course of 75 years. Therefore, 9.8kg of SLS plus 975kg of water were included in the model.

Replacement

An additional 1.5 products are included as replacements, with all life cycle modules considered, over the building's ESL of 75 years.

Manufacturing data

Manufacturing data has been collected and compiled for TOTO Vietnam. Data reporting period: 2023.

What's causing the greatest impacts

All life cycle stages

The use stage [B1-B7] dominates the results for all impact categories. The replacements module [B4] is highly dominant in all categories because of the necessity to consider an additional 1.5 products as replacements. All life cycle modules are considered throughout the estimated service life (ESL) of the building, which is 75 years. The production stage [A1-A3] itself is slightly significant but does not dominate in any impact category. Additionally, the processes associated with dismantling the product and final waste treatment during the end-of-life stage do not have a significant impact.

Production stage [A1-A3]

The ceramic parts dominate all impact categories in the production stage except for ozone depletion, non-carcinogenics, and eutrophication. The brass parts together with the injection molding process have dominant contributions to the ozone depletion, non-carcinogenics, and eutrophication impact categories. The remaining parts and processes contribute between 4% and 23% of the overall impacts in the rest of the categories. The entire production stage itself accounts for 16% of the global warming potential impact category.

Construction stage [A4-A5]

Installation of the product dominates impacts in the construction stage. Transportation by truck for delivery to the installation site contributes the most, and this stage contributes to approximately 3% of the total global warming potential impacts throughout the product's life cycle.

Use stage [B1-B7]

Product replacements dominate impacts in the use stage. The use stage itself dominates all impact categories (>75%) due to the consideration of an additional 1.5 products as replacements.

End-of-life stage [C1-C4]

The transportation to landfill dominates impacts in the end-of-life stage. Transportation and the processes for dismantling the product contribute to a relatively low portion of global warming potential (~0.2%) but account for approximately 13% of smog formation.

How we're making it greener

TOTO PeoplePlanetWater™ programs improving environmental performance

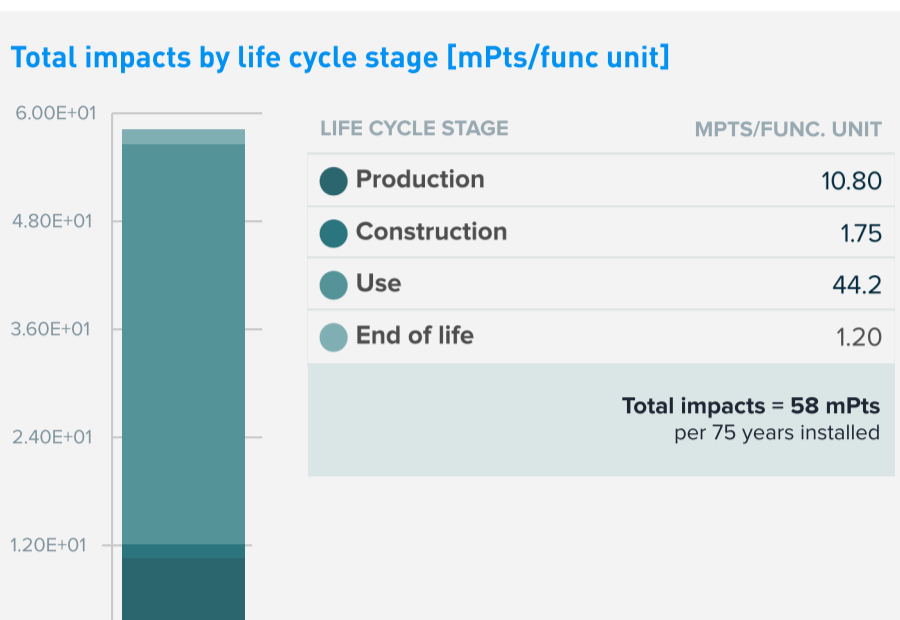
- EcoPower® reduces water consumption in the use phase
- Energy efficiency programs optimize the firing process
- 100% of post-industrial ceramic waste is recycled

[See how we make it greener](#)

Material composition greater than 1% by weight

PART	MATERIAL	%WT.
Product	Ceramic	86%
Packaging	Corrugated board	9%
Product	Brass nut and flange	3%
Other	Misc components	3%

Total impacts by life cycle stage [mPts/func unit]



LCA results

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE
	(X) A1 Raw materials	(X) A4 Transportation/Delivery	(X) B1 Use	(X) C1 Deconstruction/Demolition
	(X) A2 Transportation	(X) A5 Construction/Installation	(X) B2 Maintenance	(X) C2 Transportation
	(X) A3 Manufacturing		(X) B3 Repair	(X) C3 Waste processing
			(X) B4 Replacement	(X) C4 Disposal
			(X) B5 Refurbishment	
			(X) B6 Operational energy use	
			(X) B7 Operational water use	

Information modules:
Included (X) | Excluded (MND)*

SM Single Score

Impacts per urinal	10.8 mPts	1.75 mPts	44.2 mPts	1.20 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Ceramic parts production together with brass parts and injection molding process.	Transportation of the product to installation site or consumer and disposal of packaging.	Cleaning agent and water used during maintenance and embedded energy used to treat cleaning water.	Transport to waste processing and disposal of material flows transported to a landfill.

TRACI v2.1 results per functional unit

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE	
Ecological damage					
Impact category	Unit				
Global warming	kg CO ₂ eq	8.00E+01	1.24E+01	3.55E+02	7.29E-01
Ozone depletion	kg CFC-11 eq	2.77E-06	6.45E-08	1.44E-05	8.16E-08
Acidification	kg SO ₂ eq	5.10E-01	4.45E-01	4.00E+00	5.71E-01
Eutrophication	kg N eq	1.90E-01	2.90E-02	7.44E-01	3.62E-02
Human health damage					
Impact category	Unit				
Smog	kg O ₃ eq	8.71E+00	1.49E+01	9.80E+01	2.03E+01
Respiratory effects	kg PM _{2.5} eq	4.25E-02	5.58E-03	1.92E-01	6.13E-03
Additional environmental information					
Impact category	Unit				
Carcinogenics	CTU _h	1.66E-06	1.62E-07	7.04E-06	2.59E-08
Non-carcinogenics	CTU _h	4.90E-05	1.52E-06	1.60E-04	2.26E-07
Ecotoxicity	CTU _e	1.10E+02	2.89E+01	4.17E+02	3.98E+00
Fossil fuel depletion	MJ surplus	1.40E+02	2.09E+01	7.28E+02	3.41E+00

References

LCA Background Report

LCA background report of TOTO sanitary ceramic products, 2024; SimaPro Analyst 9.5; ecoinvent v3, Industry data 2.0, and US-EI 2.2 databases; TRACI 2.1.

ISO 14025, "Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services"

ISO 21930:2017, "Sustainability in Building Construction — Environmental Declaration of Building Products" serves as the core PCR along with Sustainable Minds Part A.

SM Part A: LCA calculation rules and report requirements, version 2023

August, 2023. PCR review conducted by the Sustainable Minds TAB, tab@sustainableminds.com.

SM Part B: Commercial urinals, v3.0

March, 2024. PCR review conducted by Jack Geibig, Chair (Ecoform) Jgeibig@ecoform.com; Hugues Imbeault-Tétreault, ing., M.Sc.A. (Groupe AGÉCO); Rebe Feraldi, LCACP, CLAR (Pacific Northwest National Laboratory).

Download PDF SM Transparency Report/EPD

SM Transparency Reports (TR) are ISO 14025 Type III environmental declarations (EPD) that enable purchasers and users to compare the potential environmental performance of products on a life cycle basis. They are designed to present information transparently to make the limitations of comparability more understandable. Environmental declarations of products that conform to the same PCR and include the same life cycle stages, but are made by different manufacturers, may not sufficiently align to support direct comparisons. They therefore cannot be used as comparative assertions unless the conditions as defined in ISO 14025 Section 6.7.2. 'Requirements for Comparability' are satisfied. In order to support comparative assertions, this EPD meets all comparability requirements stated in ISO 14025:2006. However, differences in certain assumptions, data quality, and variability between LCA data sets may still exist. Any EPD comparison must be carried out at the building level per ISO 21930 guidelines, use the same sub-category PCR where applicable, include all relevant information modules, be limited to EPDs applying a functional unit, and be based on equivalent scenarios with respect to the context of construction works. Some LCA impact categories and inventory items are still under development and can have high levels of uncertainty. To promote uniform guidance on the data collection, calculation, and reporting of results, the ACLCA methodology (ACLCA 2019) was used.

Rating systems

The intent is to reward project teams for selecting products from manufacturers who have verified improved life-cycle environmental performance.

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

Environmental product declarations

- Industry-wide (generic) EPD ½ product
- Product-specific Type III EPD 1 product

LEED BD+C: New Construction | v4.1 - LEED v4.1

Building product disclosure and optimization

Environmental product declarations

- Industry-wide (generic) EPD 1 product
- Product-specific Type III EPD 1.5 products

Collaborative for High Performance Schools National Criteria

MW C5.1 – Environmental Product Declarations

- Third-party certified type III EPD 2 points

Green Globes for New Construction and Sustainable Interiors

Materials and resources

- NC 3.5.1.2 Path B: Prescriptive Path for Building Core and Shell
- NC 3.5.2.2 and SI 4.1.2 Path B: Prescriptive Path for Interior Fit-outs

BREEAM New Construction 2018

Mat 02 - Environmental impacts from construction products

Environmental Product Declarations (EPD)

- Industry-average EPD .5 points
- Multi-product specific EPD .75 points
- Product-specific EPD 1 point

SM Transparency Report (EPD)™ + Material Health Overview™

EPD	LCA
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Transparency Report (EPD)	
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Self-declared	<input checked="" type="checkbox"/>

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**Certified
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Product Declaration**
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LCA & material health results & interpretation

Urinal UT445U

- LCA results & interpretation
- EPD additional content
- Material health**

Evaluation programs

Declare

Declare labels are issued to products disclosing ingredient inventory, sourcing, and end of life options. Declare labels are based on the Manufacturers Guide to Declare, administered by the International Living Future Institute.

How it works

Material ingredients are inventoried and screened against the [Living Building Challenge](#) (LBC) Red List which represents the ‘worst in class’ materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem.

Assessment scope and results

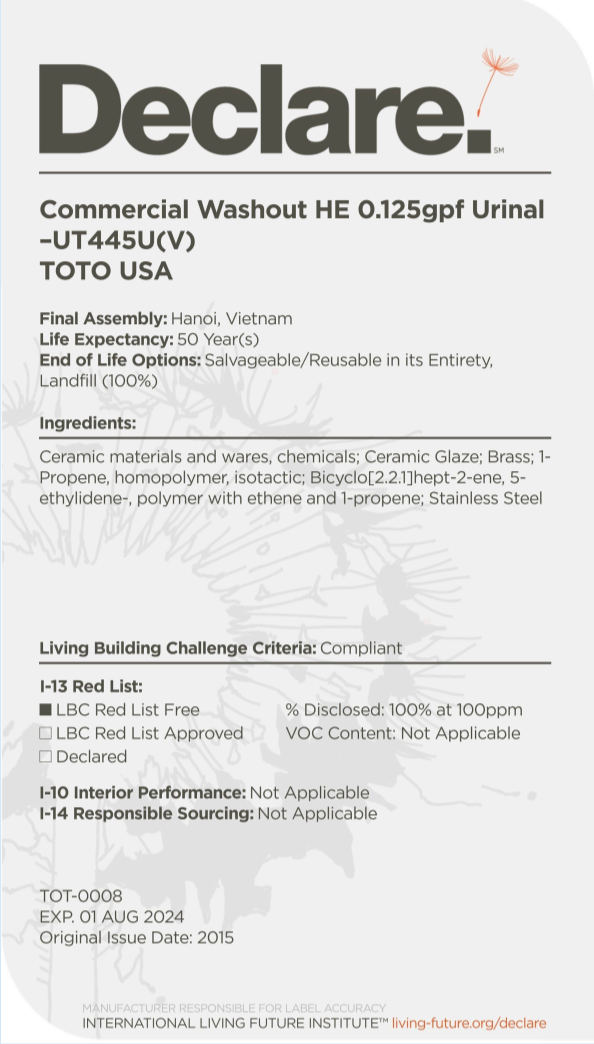
Declare™

Declare level:
The Declare product database and label are used to select products that meet the LBC's stringent materials requirements, streamlining the materials specification and certification process.

- LBC Red List Free [?]
- LBC Red List Approved [?]
- Declared [?]

Click the label to see the full declaration.

● **Ultra High Efficiency Urinal, 0.125 GPF**



What's in this product and why

Declare level

'Red List Free' is awarded to products when no materials on the Living Building Challenge's Red List are in the product.

Red List materials

No Red List materials are present in the urinal.

Where it goes at the end of its life

TOTO encourages consumers to recycle their used urinal and urinal parts. Contact your local municipality for recycling programs.

How we're making it healthier

This commercial urinal is designed to be used with the TOTO EcoPower® Urinal Flush Valve. The EcoPower technology enables the flush valve to operate off the energy grid, and it requires no routine battery replacement. This technology helps to reduce pollution and hazardous waste, thereby mitigating human health impacts.

[See how we make it greener](#)

References

Declare

[COMMERCIAL WASHOUT HE 0.125GPF URINAL –UT445U\(V\)](#)

Manufacturer's Guide to Declare

A comprehensive guide providing information about the program, the assessment methodology, how to submit material data to obtain a Declare label and how they are used to meet the Health & Happiness and Materials Petals of the Living Building Challenge.

Rating systems

LEED BD+C: New Construction | v4 - LEED v4

Building product disclosure and optimization

Material Ingredients

Credit value options 1 product each

1. Reporting 2. Optimization 3. Supply Chain Optimization

LEED BD+C: New Construction | v4.1 - LEED v4.1

Materials and resources

Material Ingredients

Credit value options 1 product each

1. Reporting 2. Optimization 3. Supply Chain Optimization

Living Building Challenge

Materials petals imperatives

10. Red List Free 12. Responsible Industry 13. Living Economy Sourcing

WELL Building Standard®

Air and Mind Features

- X07 Materials Transparency

- X08 Materials Optimization

Collaborative for High Performance Schools National Criteria

EQ C7.1 Material Health Disclosures

- Performance Approach 2 points

- Prescriptive Approach 2 points

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How we make it greener

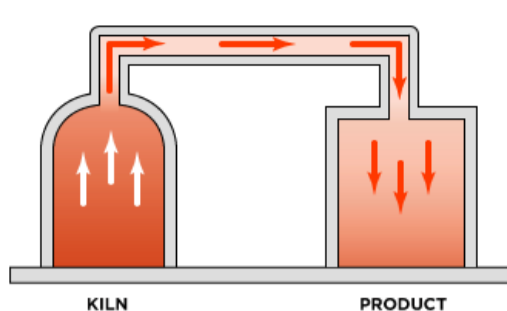
Urinal UT445U

Collapse all

PRODUCTION



↓ **15%**
Less Natural Gas



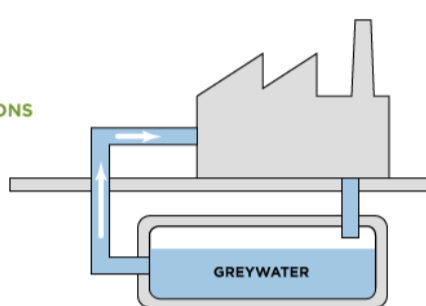
Waste heat from the kilns is routed to the product dryer. This reduces 15% natural gas consumption.



TOTO is taking additional steps at its other facilities, outside of Vietnam and Indonesia, to reduce potential environmental impacts. For example, TOTO's Morrow plant matches 100% of its electricity usage through [Georgia Power Simple Solar](#) and helps grow solar energy. 14 million kilowatt hours of green energy helps reduce 18.5 million pounds of carbon dioxide equivalents each year.

↓ **0.45M^{GALLONS}**
Total Greywater used each month

↓ **1,620^{KWH}**
Reduced energy each month



In another example of TOTO's energy savings outside of Vietnam and Indonesia, 0.45 million gallons per month of greywater is used in [TOTO Morrow's operations](#). 1,620 of kWh in energy per month is reduced due to less potable water.



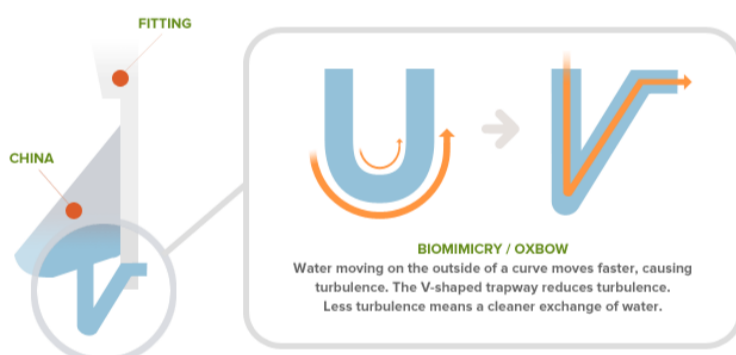
65% of all cardboard used is 100% recycled content.

CONSTRUCTION

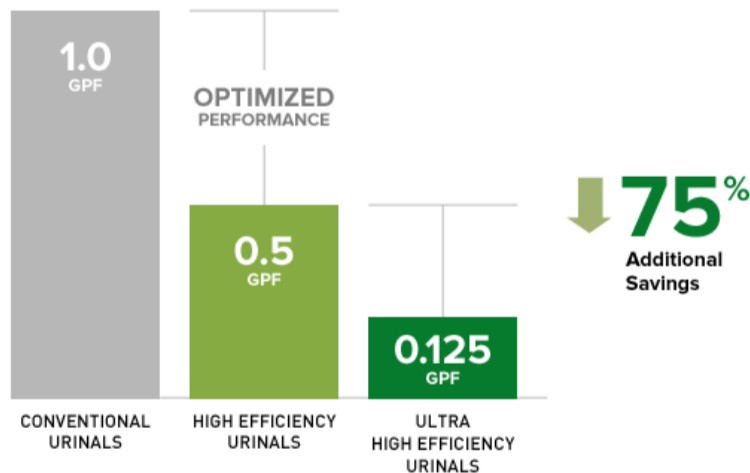


UPS parcel shipments are carbon neutral. TOTO is a registered SmartWay® Transport Partner.

USE



Designed to work in combination with the EcoPower® Ultra High-Efficiency Urinal Flush Valve, the urinal was engineered to utilize biomimicry, modeled after the oxbow affect found in nature. Water moving on the outside of a curve will move faster, causing turbulence. The 0.125gpf urinal utilizes a V-shaped trap to reduce turbulent flow, resulting in lower water use without compromising performance.



Designed to work in combination with the EcoPower® Ultra High-Efficiency Urinal Flush Valve, the 0.125gpf urinal reinforces TOTO's performance reputation while offering an additional water savings.

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