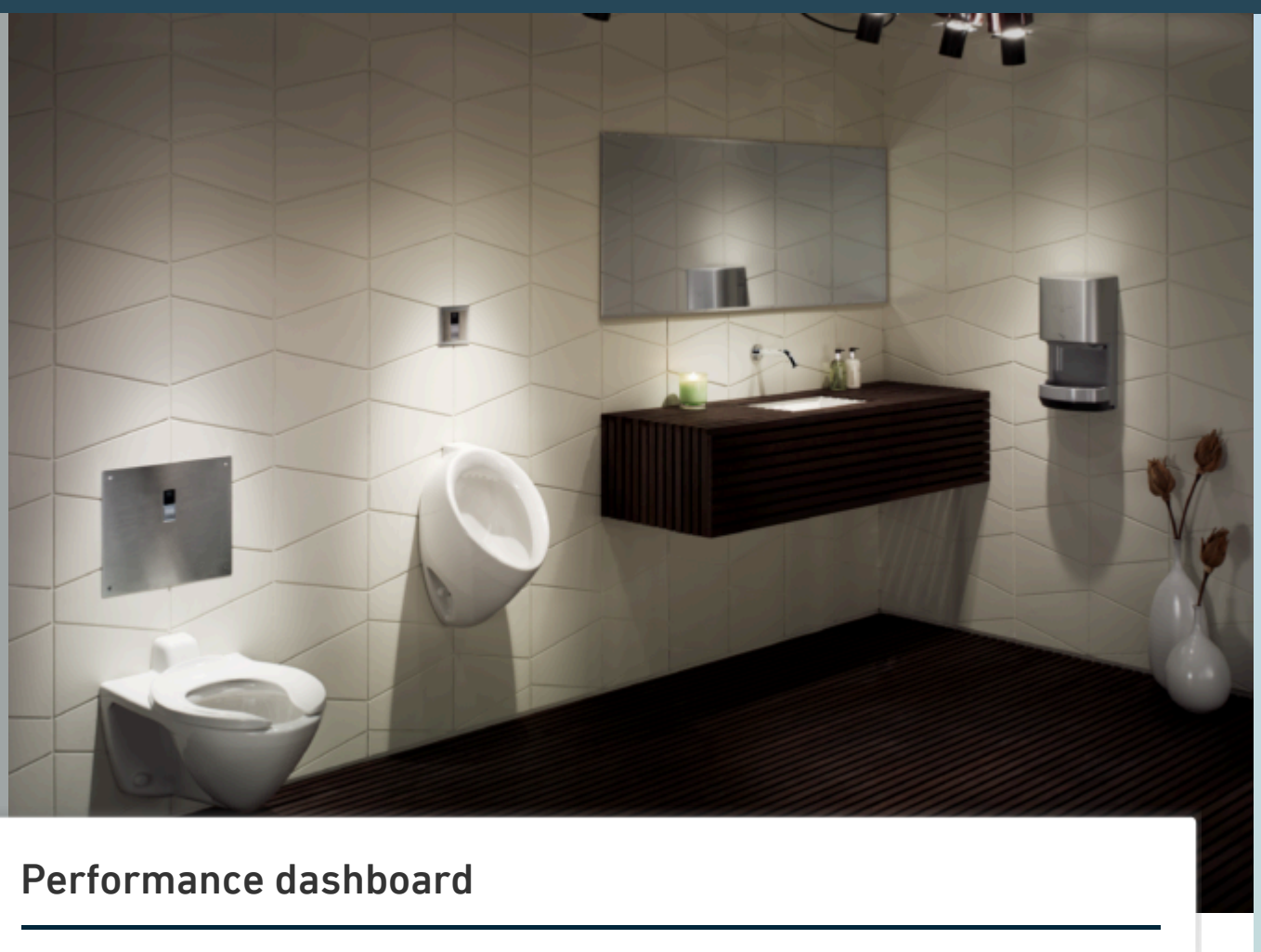
TOTO®

Ultra High Efficiency Urinal, 0.125 GPF UT105U(V)(G)

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, UT105U(V)(G)

MasterFormat® 22 42 13

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

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 – 003

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.

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

NSF International
P.O Box 130140
789 N.Dixboro Road
Ann Arbor, MI 48105, USA
www.nsf.org
734 769 8010

Certified Environmental Product Declaration
www.nsf.org

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

TOTO USA
1155 Southern Road
Morrow, GA 30260
www.totousa.com

Contact us

LCA results & interpretation

Urinal UT105U

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 Indonesia. **Data reporting period:** 2023.

Material composition greater than 1% by weight

PART	MATERIAL	%WT.
Product	Ceramic	83%
Packaging	Corrugated board	11%
Product	Brass nut and flange	4%
Other	Misc components	2%

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

LIFE CYCLE STAGE	MPTS/FUNC. UNIT
Production	9.11
Construction	1.54
Use	38.8
End of life	1.19

Total impacts = 50.6 mPts
per 75 years installed

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 18% 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 14% 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

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	
Information modules: Included (X) | Excluded (MND)*			(X) B6 Operational energy use	
			(X) B7 Operational water use	
				

SM Single Score

Impacts per urinal	9.11 mPts	1.54 mPts	38.8 mPts	1.19 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	5.66E+01	1.01E+01	2.82E+02	6.75E-01
Ozone depletion kg CFC-11 eq	1.79E-06	5.59E-08	1.15E-05	8.32E-08
Acidification kg SO_2 eq	4.03E-01	4.21E-01	3.65E+00	5.70E-01
Eutrophication kg N eq	1.79E-01	2.73E-02	7.10E-01	3.64E-02
Human health damage				
Impact category / Unit				
Smog kg O_3 eq	6.71E+00	1.42E+01	9.10E+01	2.02E+01
Respiratory effects kg $PM_{2.5}$ eq	3.53E-02	5.19E-03	1.70E-01	6.13E-03
Additional environmental information				
Impact category / Unit				
Carcinogenics CTU_h	1.38E-06	1.34E-07	6.15E-06	2.46E-08
Non-carcinogenics CTU_h	4.68E-05	1.26E-06	1.54E-04	2.84E-07
Ecotoxicity CTU_e	9.93E+01	2.39E+01	3.76E+02	3.82E+00
Fossil fuel depletion MJ surplus	8.09E+01	1.73E+01	5.45E+02	3.27E+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
3rd-party reviewed	✔
Transparency Report (EPD)	
3rd-party verified	✔

Validity: 06/24/2024 – 06/24/2029
TOTO – 20240624 – 003

Material evaluation	
MATERIAL HEALTH	
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.

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

NSF International
P.O Box 130140
789 N.Dixboro Road
Ann Arbor, MI 48105, USA
www.nsf.org
734 769 8010

Certified Environmental Product Declaration www.nsf.org

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

TOTO USA
1155 Southern Road
Morrow, GA 30260
www.totousa.com

Contact us

EPD additional content

Urinal UT105U

LCA results & interpretation | EPD additional content | Material health

Data

Background This product-specific plant-specific declaration was created by collecting production data from the Indonesia plant. All unit processes were modeled using primary data. Secondary data sources include those available in ecoinvent and USLCI databases. Literature data was used to fill any data gaps to complete the inventory.

In the manufacturing of the products, secondary materials such as scrap metals and metal bars used to hold the primary products in place were partially incorporated in the manufacturing of the primary products but were not considered due to a lack of background data in the LCA model.

Allocation Allocations of multi-input and multi-output processes follow a mass-based approach in the collected data, which is the most appropriate for the unit processes modeled. Allocation approaches in the background data follow the ecoinvent methodology. No co-product allocations were made in the model.

Cut-off criteria for the inclusion of mass and energy flows are 1% of renewable primary resource (energy) usage, 1% nonrenewable primary resource (energy) usage, 1% of the total mass input of that unit process, and 1% of environmental impacts. The total of neglected input flows per module does not exceed 5% of energy usage, mass, and environmental impacts. The only exceptions to these criteria are substances with hazardous and toxic properties, which must be listed even when the given process unit is under the cut-off criterion of 1% of the total mass.

Non-ceramic parts in urinals include strainers, hangers and spud nut kits. All parts with a weight of >1% weight of the parts (excluding ceramic and packaging materials) are included in the LCA model; no substances considered to be hazardous or toxic according to local regulations are present in the product. A check has been performed to make sure that the completeness of the overall material use is >98.5wt% of the finished product after cut-off, including the ceramic and packaging materials.

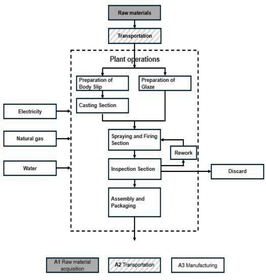
Data quality assessment

Precision: The precision of the data is considered high. Product engineers provided detailed bills of materials, and facility managers provided utility information for the manufacturing facilities. The raw material transportation distances were calculated based on the raw material manufacturers' addresses, extracted from the relevant SDS's. Proxy datasets were utilized in the LCA model when secondary data were not available, as shown in Appendix A in the published LCA background report.

Completeness: The data included is consider complete. The LCA model included all known material and energy flows. As pointed out in that section, no known flows above 1% were excluded and the sum of all excluded flows totals less than 5%, whether evaluated by mass, energy, or potential environmental impact.

Consistency: The consistency of the model is considered high. The bills of materials provided by the product engineers were developed for multiple internal departments use and are maintained regularly. The LCA practitioner also cross-referenced the installation documents and other relevant information to ensure consistency. Furthermore, modeling assumptions were consistent across the model, with preference given towards SimaPro data, where available.

Flow diagram



Scenarios and additional technical information

Distribution [A4]

Plant location		Fairburn, GA	Ontario, CA
% urinals shipped from plant		70%	30%
Distance to plant from Indonesia	Oceanic	14,723 km	14,723 km
	Rail	3,579 km	0 km
	Diesel truck	33 km	80 km

In 2023, outbound shipments of UT105U from Fairburn and Ontario were transported an average of 947 miles (1,524 km) by diesel truck and an average of 1,114 miles (1,793 km) by rail. The quantity transported by truck is 95%, and by rail 5%.

Installation [A5]

A 0.15kg wax ring was accounted for in this study. These are necessary for creating a seal between the urinal outlet and drain line.

Use stage [B1-B5]

The urinals are assumed to have a useful life of 30 years. As a result, an additional 1.5 products are included as replacements, with all life cycle modules considered, over the building's ESL of 75 years.

End-of-life stage [C1-C4]

The model reflects the assumptions that urinals are 100% landfilled. The product is assumed to be transported 100 km via truck to final disposal.

However, it should be noted that many of the associated metal and plastic components follow the waste scenarios as listed in the table below. TOTO ceramic materials can be recycled as aggregate in several applications, although this is not currently common practice. Secondary materials, including shredded and sorted metal waste, are valuable goods that lose their status as waste after the sorting process. No additional waste processing is needed in that case, and no credits for material recovery are given.

Material	Potential waste scenario - Recycling	Potential waste scenario - Landfill
Brass, zinc	70.5%	29.5%
Ceramic	0.00%	100%
Corrugated board, paper	66.5%	33.5%
PP, PVC, PET, polymer, HDPE	7.60%	92.4%
Pallet	14.5%	85.5%
SBR, EPDM rubber, silicone rubber, ABS, POM	15.0%	85.0%
Silicone, silicone product	7.60%	92.4%

Product information

Product code	ASTM or ANSI product specification	Physical properties and technical information
UT105U(V)(G)	ASME A112.19.2/CSA B45.1	Vitreous china plumbing fixture

Major system boundary exclusions

- Construction of major capital equipment
- Construction of water and wastewater infrastructure
- Maintenance and operation of support equipment
- Human labor and employee transport
- Manufacture and transport of packaging materials not associated with final product
- Energy consumption in warehouses, distribution centers, and retail facilities during the course of transport to the final customer
- Disposal of packaging materials not associated with final product
- Building operational energy and water use

Major assumptions and limitations

- Transportation of all raw materials with the mass above 1% of the cumulative mass of the model, products from vendors, is estimate based on rail lines, port information. The worst case scenario of the furthest distance from each factory to the manufacturing facility to transport kaolin with ocean freight method was considered.
- Water content of sludge was measured and reported; however, this measurement not performed routinely.
- Pallet use is assumed based on the average numbers per unit of product and reported pallet quantity of specific models.

LCIA results, resource use, output and waste flows, and carbon emissions & removals per functional unit

Parameter	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5-B7, C1	C2	C3	C4	Total
LCIA results													
Ozone depletion	kg CFC-11 eq	1.79E-06	2.63E-08	2.96E-08	0	2.48E-06	0	9.05E-06	0	4.15E-10	1.09E-08	7.19E-08	**1.35E-05**
Global warming	kg CO2 eq	9.93E+01	2.23E+01	1.57E+00	0	1.89E+01	0	2.42E+02	0	5.78E-01	1.66E+00	1.58E+00	**3.88E+02**
Smog	kg O3 eq	1.79E-01	7.90E-03	1.94E-02	0	2.49E-02	0	8.91E+01	0	8.46E-05	1.81E-02	1.82E-02	**8.94E+01**
Acidification	kg SO2 eq	3.53E-02	2.21E-03	2.98E-03	0	1.89E-02	0	3.43E+00	0	2.03E-05	3.03E-03	3.08E-03	**3.50E+00**
Eutrophication	kg N eq	1.38E-06	1.25E-07	9.28E-09	0	7.87E-07	0	6.85E-01	0	3.25E-09	1.16E-08	9.74E-09	**6.85E-01**
Respiratory effects	kg PM2.5 eq	4.03E-01	1.37E-01	2.84E-01	0	2.24E-01	0	1.51E-01	0	1.30E-03	2.84E-01	2.85E-01	**1.77E+00**
Additional environmental information													
Carcinogenics	CTUh	1.38E-06	1.25E-07	9.28E-09	0	7.87E-07	0	5.36E-06	0	3.25E-09	1.16E-08	9.74E-09	**7.69E-06**
Non carcinogenics	CTUh	4.03E-01	1.37E-01	2.84E-01	0	2.24E-01	0	1.46E-04	0	1.30E-03	2.84E-01	2.85E-01	**1.62E+00**
Ecotoxicity	CTUe	4.68E-05	1.17E-06	8.64E-08	0	7.73E-06	0	2.42E+02	0	3.03E-08	1.64E-07	8.94E-08	**2.42E+02**
Fossil fuel depletion	MJ surplus	5.66E+01	9.10E+00	1.02E+00	0	3.96E+01	0	4.36E+02	0	2.35E-01	1.47E-01	2.93E-01	**5.43E+02**
Resource use indicators													
Renewable primary energy used as energy carrier (fuel)	MJ, LHV	-1.50E+01	-3.52E+01	-3.45E+01	0	3.68E+01	0	-2.19E+02	0	-3.50E+01	-1.33E+02	-3.55E+01	**-4.70E+02**
Renewable primary resources with energy content used as material	MJ, LHV	1.83E+02	3.55E+01	3.55E+01	0	3.55E+01	0	7.39E+02	0	3.50E+01	1.33E+02	3.55E+01	**1.23E+03**
Total use of renewable primary resources with energy content	MJ, LHV	1.68E+02	2.50E-01	1.02E+00	0	7.23E+01	0	5.21E+02	0	6.74E-03	2.10E-01	2.85E-02	**7.63E+02**
Non-renewable primary resources used as an energy carrier (fuel)	MJ, LHV	7.72E+02	1.19E+02	7.91E+00	0	1.00E+03	0	4.02E+03	0	8.14E-01	8.81E+00	1.07E+01	**5.94E+03**
Non-renewable primary resources with energy content used as material	MJ, LHV	1.21E+01	2.35E+00	2.35E+00	0	2.35E+00	0	3.58E+01	0	2.35E+00	0	2.35E+00	**5.97E+01**
Total use of non-renewable primary resources with energy content	MJ, LHV	7.84E+02	1.22E+02	1.03E+01	0	1.00E+03	0	4.06E+03	0	3.17E+00	8.81E+00	1.30E+01	**6.00E+03**
Secondary materials	kg	0	0	0	0	0	0	0	0	0	0	0	**0**
Renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	**0**
Non-renewable secondary fuels	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	**0**
Recovered energy	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	**0**
Use of net fresh water resources	m3	7.49E-06	1.09E-03	1.04E-02	0	8.37E-04	0	1.60E-02	0	2.78E-04	0	4.08E-04	**2.90E-02**
Output flows and waste category indicators													
Hazardous waste disposed	kg	7.25E-03	0	0	0	0	0	1.09E-02	0	0	0	0	**1.82E-02**
Non-hazardous waste disposed	kg	1.33E+01	1.20E+00	1.43E+00	0	2.93E+01	0	6.77E+01	0	5.40E-01	0	1.55E+01	**1.29E+02**
High-level radioactive waste, conditioned, to final repository	kg	4.34E-03	3.20E-05	2.02E-04	0	3.81E-03	0	1.65E-02	0	6.16E-07	3.62E-05	3.51E-06	**2.49E-02**
Intermediate- and low-level radioactive waste, conditioned, to final repository	kg	1.11E-05	2.10E-07	1.01E-07	0	8.86E-06	0	4.57E-05	0	5.90E-09	6.28E-08	1.91E-08	**6.61E-05**
Components for re-use	kg	0	0	0	0	0	0	0	0	0	0	0	**0**
Materials for recycling	kg	0	0	0	0	2.93E+01	0	4.39E+01	0	9.80E-01	9.80E-01	9.80E-01	**7.61E+01**
Materials for energy recovery	kg	0	0	0	0	0	0	0	0	0	0	0	**0**
Exported energy	MJ, LHV	0	0	0	0	0	0	0	0	0	0	0	**0**
Carbon emissions and removals													
Biogenic Carbon Removal from Product	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Emission from Product	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Removal from Packaging	kg CO2	2.04E+00	0	0	0	0	0	0	0	0	0	0	**2.04E+00**
Biogenic Carbon Emission from Packaging	kg CO2	0	0	2.04E+00	0	0	0	0	0	0	0	0	**2.04E+00**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**
Calcination Carbon Emissions	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**
Carbonation Carbon Removals	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**

Carbon Emissions from Combustion of Waste from Renewable and Non-Renewable Sources used in Production Processes	kg CO2	0	0	0	0	0	0	0	0	0	0	0	**0**

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 – 003

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.

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

NSF International
P.O Box 130140
789 N.Dixboro Road
Ann Arbor, MI 48105, USA
www.nsf.org
734 769 8010

Certified Environmental Product Declaration
www.nsf.org

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

TOTO USA
1155 Southern Road
Morrow, GA 30260
www.totousa.com

Contact us

LCA & material health results & interpretation

Urinal UT105U

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™

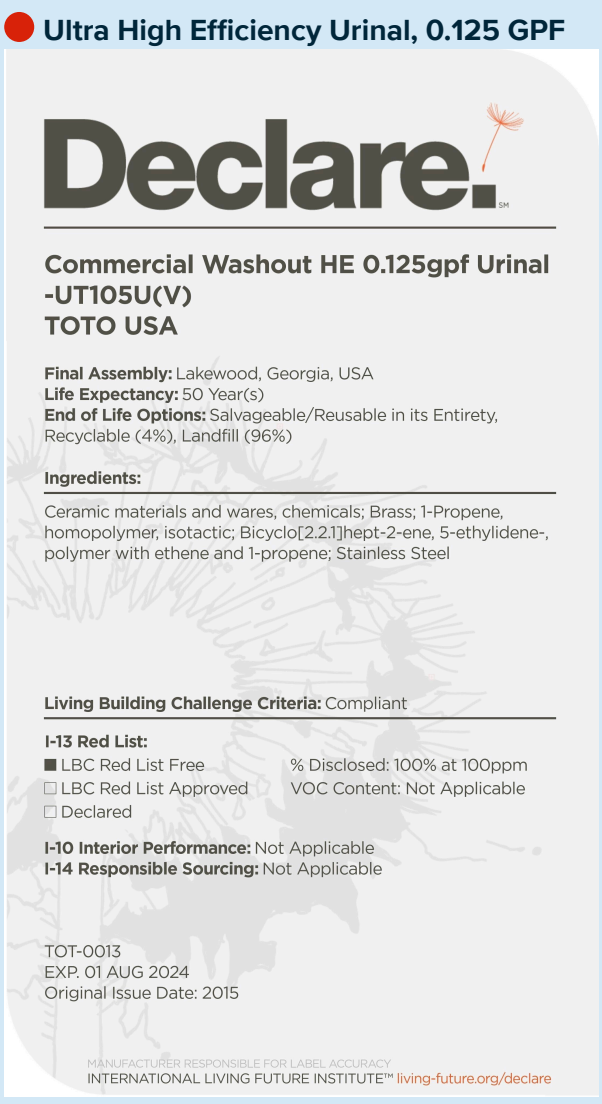
Declare level:

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



Declare.

Commercial Washout HE 0.125gpf Urinal -UT105U(V)
TOTO USA

Final Assembly: Lakewood, Georgia, USA
Life Expectancy: 50 Year(s)
End of Life Options: Salvageable/Reusable in its Entirety, Recyclable (4%), Landfill (96%)

Ingredients:

Ceramic materials and wares, chemicals; Brass; 1-Propene, homopolymer, isotactic; Bicyclo[2.2.1]hept-2-ene, 5-ethylidene-, polymer with ethene and 1-propene; Stainless Steel

Living Building Challenge Criteria: Compliant

I-13 Red List:
■ LBC Red List Free
□ LBC Red List Approved
□ Declared

% Disclosed: 100% at 100ppm
VOC Content: Not Applicable

I-10 Interior Performance: Not Applicable
I-14 Responsible Sourcing: Not Applicable

TOT-0013
EXP. 01 AUG 2024
Original Issue Date: 2015

MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY
INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

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 -UT105U(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

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 – 003

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.

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

NSF International
P.O Box 130140
789 N.Dixboro Road
Ann Arbor, MI 48105, USA
www.nsf.org
734 769 8010

Certified Environmental Product Declaration www.nsf.org

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

TOTO USA
1155 Southern Road
Morrow, GA 30260
www.totousa.com

Contact us

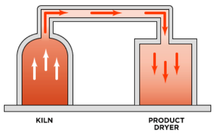
How we make it greener

Urinal UT105U

Collapse all

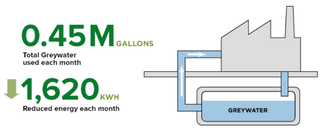
PRODUCTION

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.



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.

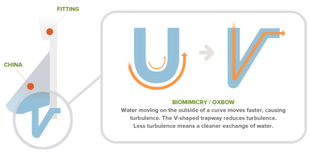
CONSTRUCTION

CARBON NEUTRAL SHIPMENT ups

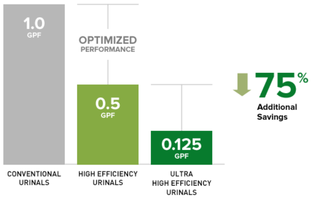
SmartWay Transport Partner
Getting There With Cleaner Air

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.

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 – 003

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.

Ecoform, LLC
11903 Black Road
Knoxville, TN 37932
(865) 850-1883
www.ecoform.com

NSF International
P.O Box 130140
789 N.Dixboro Road
Ann Arbor, MI 48105, USA
www.nsf.org
734 769 8010

NSF Certified Environmental Product Declaration www.nsf.org

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

TOTO USA
1155 Southern Road
Morrow, GA 30260
www.totousa.com

Contact us