

TOTO_®

SM Transparency Catalog > TOTO Showroom > Commercial Wall-Mount Lavatory LT307(A)

TOTO®

Commercial Wall-Mount Lavatory

LT307(A)



Performance dashboard

Features & functionality

21" \times 18 1/4" lavatory with back splash 14 15/16" x 10 3/8" basin 11/4" O.D. drain hole Anti-splash rim Concealed front overflow Punching for concealed arm carrier Durable & easy to maintain Available for 4" or 8" spread faucets Soap dispenser hole option ADA compliant

Visit TOTO for more product information for: LT307, LT307A, LT307.4, LT307.8

MasterFormat® #22 42 16.13



TOTO People-Centered Design Smart Fact: This unit exemplifies our dedication to ADA compliance. By taking into account people of all ages and abilities, TOTO ensures that their bathroom experience is elegant, accessible ar beautiful every time.

Environment & materials

Certifications & rating systems: Life cycle assessment scope: Cradle to grave Declare[™] label Contributes to earning credits in LEED®

See LCA, interpretation & rating systems

See materials, interpretation & rating systems



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

EPD	LCA
3rd-party reviewed	S
Transparency F	Report (EPD)
3rd-party verified	S
Validity: 01/08/2025 – 0 SM-TOTO – 20250108 –	
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; the reference PCR; and ISO 14025:2006.

Ecoform, LLC 11903 Black Road Knoxville, TN 37932 (865) 850-1883

NSF International P.O Box 130140, 789 N.Dixboro Road, Ann Arbor, MI 48105, USA

www.nsf.org

734 769 8010



SUMMARY

Reference PCR SM Part B: Commercial lavatories,

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

Functional unit One commercial lavatory in an

average commercial environment over the estimated service life of the building LCIA methodology; LCA software;

LCI database TRACI 2.1; SimaPro Analyst 9.6; ecoinvent and USLCI databases

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.

© 2024 | The SM Transparency Report [EPD][™] Program is operated by ° (www.sustainab nds.com) | |

Certified Environmental Product Declaration

Public LCA LCA background report of TOTO Commercial Lavatories, 2024

1155 Southern Road Morrow, GA 30260

TOTO USA

Contact us

SM Transparency Catalog
TOTO Showroom
Commercial Wall-Mount Lavatory LT307(A)

TOTO

LCA results & interpretation

Life cycle assessment

Sustainable Minds[®]

nsparency Report (EPD)

Scope and summary

○ Cradle to gate ○ Cradle to gate with options **V** Cradle to grave

Functional unit

One commercial lavatory in an average commercial environment over the estimated service life of the building. This sink basin features an unembellished design with an anti-splash rim for mess-free use. 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 lavatory is 20 years, which is an industry-accepted average lifespan based on the economic lifespan of the product. Faucets are provided separately and were not included in this study.

Installation

After the lavatory is distributed to the site of installation, it is installed manually. Cardboard and paper packaging waste is assumed to be disposed according to the pathways described in EPA's Sustainable Materials Management Fact sheet, where 25.6% is landfilled, 6.2% is incinerated, and 68.2% is recycled.

Maintenance

Regular cleaning is assumed to use 10mL of a 1% sodium lauryl sulfate (SLS) solution daily in a commercial setting for 75 years, which is the building estimated service life. The use of 10mL/clean over 260days/year for 75 years gives a total of 195L of solution. Using a density of 1.01kg/L for a 1% SLS solution, 195kg of solution will be needed over the course of 75 years. Therefore, 2kg of SLS plus 195kg of water were included in the model.

Replacement

At the end of its RSL, the lavatory is assumed to be replaced. Therefore, an additional 2.75 products are included as replacements, with all life cycle modules considered, over the building's ESL of 75 years.

Material composition by wt%		
PART	MATERIAL	% WT
Ceramic	Ceramic	88.8%
Packaging	Cardboard, paper inserts	9.3%
Mounting hardware	Stainless steel	1.9%

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



What's causing the greatest impacts

All life cycle stages

The use stage [B1-B7] dominates the results for all impact categories. The replacement module is highly dominant in all categories because of the necessity to consider an additional 2.75 products as replacements. The next highest contributor is the cleaning agents used during the maintenance phase. 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.

Commercial Wall-Mount Lavatory

Production stage [A1-A3]

Ceramic parts dominate the material contribution in the product stage, except for ecotoxicity, non-carcinogenics and eutrophication. Those categories are more impacted by stainless steel, the extrusion and turning manufacturing process of steel, or transportation by truck. Stainless steel and truck transportation also have a relevant impact on all other categories, except for ozone depletion. Corrugated board has a significant contribution to the eutrophication category, while stainless steel has the greatest impact on the carcinogenics category. The injection molding process has a significant contribution to the ozone depletion impact category.

Construction stage [A4-A5]

Transportation by truck for delivery to the installation site dominates impacts in the construction stage. Installation of the product is the next highest contributor. This stage contributes less than 2% 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 (>85%) due to the consideration of an additional 2.75 products as replacements. The cleaning agents used to maintain cleanliness are also contributors in this stage.

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 (<1%) of total results for all impact categories.

Manufacturing data

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

How we're making it greener

TOTO PeoplePlanetWater[™] programs improving environmental performance

- Dual-Max[®], E-Max[®], Tornado Flush[™], 1G[®], and EcoPower[®] reduce water consumption in the use phase
- Energy efficiency programs optimize the firing process
- Modular packing methods increase the fill rate of a trailer, cutting down on the number of trips needed
- 100% of post-industrial ceramic waste is recycled

See how we make it greener

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	
	NUMP			R. S.

SM Single Score Learn about SM Single Score results

Impacts per lavatory	4.94 mPts	0.48 mPts	29.6 mPts	0.04 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Ceramic parts production as well as well zinc and brass parts together with zinc turning process.	Transportation of the product to installation site or consumer and disposal of packaging.	Volume of water use for cleaning the product and the embedded energy use (such as electricity) in the water used.	Transport to waste processing, 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	0	4.24E+01	6.01E+00	2.77E+02	4.11E-01
Ozone depletion	kg CFC-11 eq	0	5.72E-06	8.59E-09	3.32E-05	5.92E-08
Acidification	kg SO ₂ eq	0	1.41E-02	7.06E-04	8.78E-02	1.40E-04
Eutrophication	kg N eq	0	1.66E-02	3.09E-03	1.12E-01	2.06E-04

Human health damage

Impact category	Unit					
Smog	kg O_3 eq	0	2.35E+00	8.92E-01	1.66E+01	7.28E-02
Respiratory effects	kg PM _{2.5} eq	0	1.34E-01	3.24E-02	9.66E-01	2.54E-03

Additional environmental information

Impact category	Unit					
Carcinogenics	CTU _h	0	1.60E-06	7.28E-08	8.58E-06	5.13E-09
Non-carcinogenics	CTU _h	0	4.27E-06	6.93E-07	2.97E-05	4.14E-08
Ecotoxicity	CTU _e	0	3.85E+01	1.29E+01	2.52E+02	6.90E-01
Fossil fuel depletion	MJ surplus	0	8.48E+01	9.18E+00	5.75E+02	9.89E-01

References

LCA Background Report

LCA background report of TOTO Commercial Lavatories, 2024; SimaPro Analyst 9.6; ecoinvent and USLCI 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,

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

tab@sustainableminds.com.

SM Part B: Commercial lavatories, v1.0

October, 2024. PCR review conducted by Thomas P. Gloria, Ph. D., Chair (Industrial Ecology Consultants) t.gloria@industrial-ecology.com; Jack Geibig (Ecoform) Jgeibig@ecoform.com; Rifat Karim (Independent Consultant) rifat.chimique@gmail.com.

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 i 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 subcategory 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.

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

Building product disclosure and optimization

Environmental product declarations

O 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

VC 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)

O 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	S
Transparency I	Report (EPD)
3rd-party verified	S (18)
Validity: 01/08/2025 – 0 SM-TOTO – 20250108 -	
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; the reference PCR; and ISO 14025:2006.

Ecoform, LLC 11903 Black Road Knoxville, TN 37932 (865) 850-1883

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

Certified Environmental

Product Declaration

www.nsf.org

SUMMARY

Reference PCR

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

Functional unit

One commercial lavatory in an average commercial environment over the estimated service life of the building

LCIA methodology; LCA software; LCI database

TRACI 2.1; SimaPro Analyst 9.6; ecoinvent and USLCI databases

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.

Public LCA

LCA background report of TOTO Commercial Lavatories, 2024

TOTO USA 1155 Southern Road Morrow, GA 30260



ansparency Report (EPD)

1 PERFORMANCE DASHBOARD

TOTO

EPD additional content

Sustainable Minds®

EPD additional content

Data

Background This product-specific plant-specific declaration was created by collecting production data from the Mexico location. 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.

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.

The commercial lavatory products have no materials considered hazardous or toxic according to the TRI or local regulations. Non-ceramic parts that are included with the lavatories are the wall bracket and mounting screws. All parts with a weight of >1% weight of the parts (excluding ceramic and packaging materials) are included in the LCA model. A check has been performed to make sure that the completeness of the overall material use is >99.0wt% of the finished product after cut-off, including the ceramic and packaging materials.

Data sets contributing 5% or more to any environmental impact category

Data set name	Database name and version	Software type and version	Geography	Allocation method
Stainless steel, SUS303 (austenitic) 9% Ni 18% Cr US-El China	ecoinvent v3.10	SimaPro Analyst 9.6	China	By mass
Corrugated board, fresh fibre, double wall, at plant/RER U US-EI 2.2	US-EI 2.2	SimaPro Analyst 9.6	United States	By mass
Electricity, low voltage, at grid, Mexico US-El 2.2	US-EI 2.2	SimaPro Analyst 9.6	Mexico	By mass
Heat, natural gas, at boiler modulating <100kW/RER S	ecoinvent v3.10	SimaPro Analyst 9.6	Europe	By mass
Transport, combination truck, average fuel mix NREL/US U	USLCI	SimaPro Analyst 9.6	United States	By mass
Transport, lorry >16t, fleet average/RER S	ecoinvent v3.10	SimaPro Analyst 9.6	Europe	By mass

Flow diagram



Scenarios and additional technical information

Distribution [A4]

Plant location	Fairburn, GA	
Distance (TOTO Mexico to plant)	3,277 km	
Vehicle type	Diesel truck	

In 2023, outbound shipments of lavatories from Fairburn were transported an average of 883 miles (1,421 km) by diesel truck and an average of 1,269 miles (2,042 km) by rail. The quantity transported by truck is 83%, and by rail 17%.

End of life [C1-C4]

The model reflects the assumptions that lavatories are 100% disposed in a sanitary landfill. 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
Stainless steel	70.50%	29.50%
Ceramic	0.00%	100%
Corrugated board, paper	66.50%	33.50%
Pallet	14.50%	85.50%

Product information

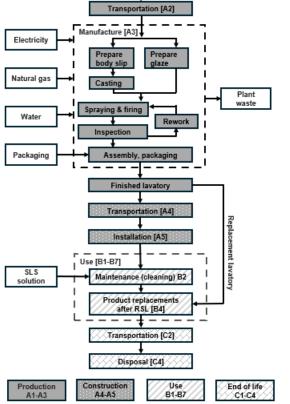
Product code	ASTM or ANSI product specification	Physical properties and technical information
LT307R(A)	ASME A112.19.2/CSA B45.1 Certifications: IAPMO(cUPC)	Commercial lavatory

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.

Major system boundary exclusions

- Construction of major capital equipment, water & wastewater infrastructure
- Maintenance and operation of support equipment •
- Human labor and employee transport ۰
- Manufacture & transport of packaging materials not associated w/ 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 estimated based on rail lines and port information.
- Pallet use is assumed based on the average numbers per unit of product and reported pallet quantity of specific models.

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 SDSs.

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 considered 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.

The reported values for all indicators in the below table for B1, B3, and B5-C1 are zero.

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

Parameter	A1-A3	A4	A5	B2	В4	C2	СЗ	C4	Total
LCIA results									
Smog (kg O3 eq)	2.35E+00	8.90E-01	1.98E-03	3.76E-01	1.62E+01	4.09E-02	0.00E+00	3.19E-02	1.99E+01
Ozone depletion (kg CFC-11 eq)	5.72E-06	5.92E-09	2.67E-09	4.95E-07	3.27E-05	4.52E-10	0.00E+00	5.87E-08	3.90E-05
Eutrophication (kg N eq) Acidification (kg SO2 eq)	1.66E-02 1.34E-01	1.96E-03 3.22E-02	1.13E-03 1.75E-04	4.83E-03 4.33E-02	1.07E-01 9.23E-01	9.24E-05 1.42E-03	0.00E+00 0.00E+00	1.14E-04 1.12E-03	1.32E-01 1.14E+00
Respiratory effects (kg PM2.5	1.41E-02	6.92E-04	1.42E-05	3.73E-03	8.41E-02	2.22E-05	0.00E+00	1.18E-04	1.03E-01
eq)		5.28E+00	7.32E-01		2.69E+02	2.57E-01			
Global warming (kg CO2 eq) Additional environmental info	4.24E+01	5.265700	7.32E-01	7.79E+00	2.095+02	2.572-01	0.00E+00	1.54E-01	3.25E+02
Fossil fuel depletion (MJ surplus)	8.48E+01	9.15E+00	3.01E-02	2.27E+01	5.52E+02	4.54E-01	0.00E+00	5.35E-01	6.69E+02
Ecotoxicity (CTUe)	3.85E+01	1.29E+01	1.77E-02	3.82E+00	2.48E+02	6.32E-01	0.00E+00	5.79E-02	3.04E+02
Carcinogenics (CTUh)	1.60E-06	7.25E-08	3.41E-10	1.59E-07	8.42E-06	3.55E-09	0.00E+00	1.58E-09	1.03E-05
Non carcinogenics (CTUh) Resource use indicators	4.27E-06	6.90E-07	3.47E-09	1.56E-06	2.81E-05	3.31E-08	0.00E+00	8.30E-09	3.47E-05
Renewable primary energy used as energy carrier (fuel) (MJ, LHV)	-9.06E+01	-3.02E+01	-3.04E+01	-1.52E+01	-3.47E+02	-2.99E+01	0.00E+00	-3.04E+01	-5.74E+02
Renewable primary resources with energy content used as material (MJ, LHV)	1.57E+02	3.04E+01	3.04E+01	3.04E+01	6.08E+02	2.99E+01	0.00E+00	3.04E+01	9.13E+02
Total use of renewable primary resources with energy content (MJ, LHV)	6.60E+01	2.04E-01	9.46E-03	1.53E+01	2.61E+02	7.44E-03	0.00E+00	2.73E-02	3.43E+02
Non-renewable primary resources used as an energy carrier (fuel) (MJ, LHV)	7.30E+02	7.00E+01	2.41E-01	2.03E+02	4.73E+03	3.42E+00	0.00E+00	4.09E+00	5.74E+03
Non-renewable primary resources with energy content used as material (MJ, LHV)	2.18E-01	4.24E-02	4.24E-02	4.24E-02	6.46E-01	4.24E-02	0.00E+00	4.24E-02	1.08E+00
Total use of non-renewable primary resources with energy content (MJ, LHV)	7.30E+02	7.00E+01	2.84E-01	2.03E+02	4.73E+03	3.46E+00	0.00E+00	4.14E+00	5.74E+03
Secondary materials (kg)	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Renewable secondary fuels (MJ, LHV)	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Non-renewable secondary fuels (MJ, LHV)	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Recovered energy (MJ, LHV)	0	0	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of net fresh water resources (m3)	1.10E-02	7.80E-04	1.06E-02	1.57E-04	4.08E-04	3.02E-04	0.00E+00	9.95E-04	2.42E-02
Abiotic depletion potential, fossil (MJ)	6.30E+02	6.55E+01	2.34E-01	1.75E+02	4.10E+03	3.21E+00	0.00E+00	3.80E+00	4.98E+03
Output flows and waste categ	ory indicators								
Hazardous waste disposed (kg)	2.70E-01	0	0	0	0	0	0	0	2.70E-01
Non-hazardous waste disposed (kg)	4.70E-01	1.20E+00	1.43E+00	2.93E+01	7.74E+01	5.40E-01	0.00E+00	1.87E+01	1.30E+02
High-level radioactive waste, conditioned, to final repository (kg)	3.09E-01	1.30E-05	4.78E-07	7.64E-04	2.61E-01	6.72E-07	0.00E+00	2.16E-06	5.71E-01
Intermediate- and low-level radioactive waste, conditioned, to final repository (kg)	5.69E-05	6.66E-08	4.31E-09	1.72E-06	4.75E-05	6.43E-09	0.00E+00	1.06E-08	1.06E-04
Components for re-use (kg)	0	0	0	0	0	0	0	0	0
Materials for recycling (kg)	0	0	0	2.93E+01	5.33E+01	2.09E+00	0.00E+00	2.09E+00	8.67E+01
Materials for energy recovery (kg)	0	0	0	0	0	0	0	0	0
Exported energy (MJ, LHV)	0	0	0	0	0	0	0	0	0
Carbon emissions and remova Biogenic Carbon Removal from Product (kg CO2)	0	0	0	0	0	0	0	0	0
Biogenic Carbon Emission from Product (kg CO2)	0	0	0	0.00E+00	0.00E+00	0	0	0	0
Biogenic Carbon Removal from Packaging (kg CO2)	1.74E+00	0	0	0.00E+00	4.79E+00	0	0	0	6.53E+00
Biogenic Carbon Emission from Packaging (kg CO2)	0	0	1.74E+00	0.00E+00	4.79E+00	0	0	0	6.53E+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
Calcination Carbon Emissions (kg CO2)	0	0	0	0.00E+00	0.00E+00	0	0	0	0
Carbonation Carbon Removals (kg CO2)	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

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

EPD	LCA
3rd-party reviewed	🛇 🕓
Transparency Repo	ort (EPD)
3rd-party verified	🛇 🕔
Validity: 01/08/2025 – 01/17/2 SM-TOTO – 20250108 – 001	

MATERIAL HEALTH	Materia evaluatior
Self-declared	S

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; the reference PCR; and ISO 14025:2006.

Ecoform, LLC 11903 Black Road Knoxville, TN 37932 (865) 850-1883

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



SUMMARY

Reference PCR

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

Functional unit

One commercial lavatory in an average commercial environment over the estimated service life of the building

LCIA methodology; LCA software; LCI database TRACI 2.1; SimaPro Analyst 9.6;

ecoinvent and USLCI databases 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.

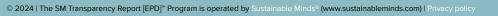
TOTO USA 1155 Southern Road

Morrow, GA 30260

Contact us



LCA background report of TOTO Commercial Lavatories, 2024





TOTO_®

SM Transparency Catalog
TOTO Showroom
Commercial Wall-Mount Lavatory LT307(A)

LCA & material health results & interpretation

Commercial Wall-Mount Lavatory

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.

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

Assessment scope and results

Declare™

Inventory threshold: 100 ppm

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.



Click the label to see the full declaration.

Commercial Wall-Mount Lavatory



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. The LBC Red List represents the "worst in class" materials, chemicals, and elements known to pose serious risks to human health and the greater ecosystem.

What's in the product and why

The ceramic body and glaze make up the majority of the total mass of the lavatory. Therefore, manufacturing and transportation of the ceramic create the greatest human health impacts when compared to the overall manufacture of the entire lavatory. By specifying a lavatory manufactured in North America, the consumer helps mitigate these human health impacts.

Red List materials

No Red list materials are present in the lavatory.

Where it goes at the end of its life

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

How we're making it healthier

Goals and plans for improvement

- Remove the mounting hardware from the lavatory, allowing the customer to determine the most appropriate means for installation.
- Reduce the amount of ceramic needed in the design of the lavatory.

See how we make it greener

Declare

TOTO USA, Declare label for Commercial Wall-Mount Lavatory

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 3. Supply Chain Optimization 🔮 1. Reporting 2. Optimization

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

Material Ingredients

Credit value options	1 product each

Optimization ✓ 1. Reporting ○ 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 Repo	ort (EPD)
3rd-party verified	S 🔊
Validity: 01/08/2025 – 01/17/2 SM-TOTO – 20250108 – 001	
	Material

MATERIAL HEALTH evaluation Self-declared S

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; the reference PCR; and ISO 14025:2006.

Ecoform, LLC 11903 Black Road Knoxville, TN 37932 (865) 850-1883

NSF International P.O Box 130140, 789 N.Dixboro Road, Ann Arbor, MI 48105, USA

734 769 8010



Certified Environmental Product Declaration www.nsf.org

SUMMARY

Reference PCR

SM Part B: Commercial lavatories, v1.0

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

Functional unit

One commercial lavatory in an average commercial environment over the estimated service life of the buildina

LCIA methodology; LCA software; LCI database TRACI 2.1; SimaPro Analyst 9.6; ecoinvent and USLCI databases

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.

Public LCA

TOTO USA 1155 Southern Road Morrow, GA 30260



SM Transparency Catalog
TOTO Showroom
Commercial Wall-Mount Lavatory LT307(A)

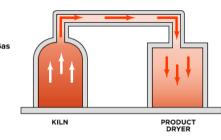
How we make it greener

Commercial Wall-Mount Lavatory

Expand all



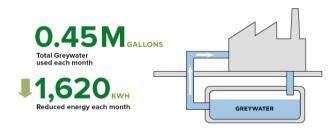




Waste heat from the kilns is routed to the product dryer. This reduces 15% natural gas consumption.



TOTO is taking additional steps at its other facilities, outside of Vietnam, Indonesia, and India, 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.









TOTO participates in the UPS Carbon Neutral program. TOTO is a certified SmartWay® Transport Partner.



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

EPD LC.			
3rd-party reviewed	S (15)		
Transparency F	Report (EPD)		
3rd-party verified	S 🔊		
Validity: 01/08/2025 – 0 SM-TOTO – 20250108 –			
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; the reference PCR; and ISO 14025:2006.

Ecoform, LLC 11903 Black Road Knoxville, TN 37932 (865) 850-1883

NSF International P.O Box 130140, 789 N.Dixboro Road, Ann Arbor, MI 48105, USA

www.nsf.org

734 769 8010



SUMMARY

Reference PCR SM Part B: Commercial lavatories, v1.0

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

Functional unit

One commercial lavatory in an average commercial environment over the estimated service life of the building

LCIA methodology; LCA software; LCI database

TRACI 2.1; SimaPro Analyst 9.6; ecoinvent and USLCI databases

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.

Public LCA

TOTO USA 1155 Southern Road Morrow, GA 30260

Contact us