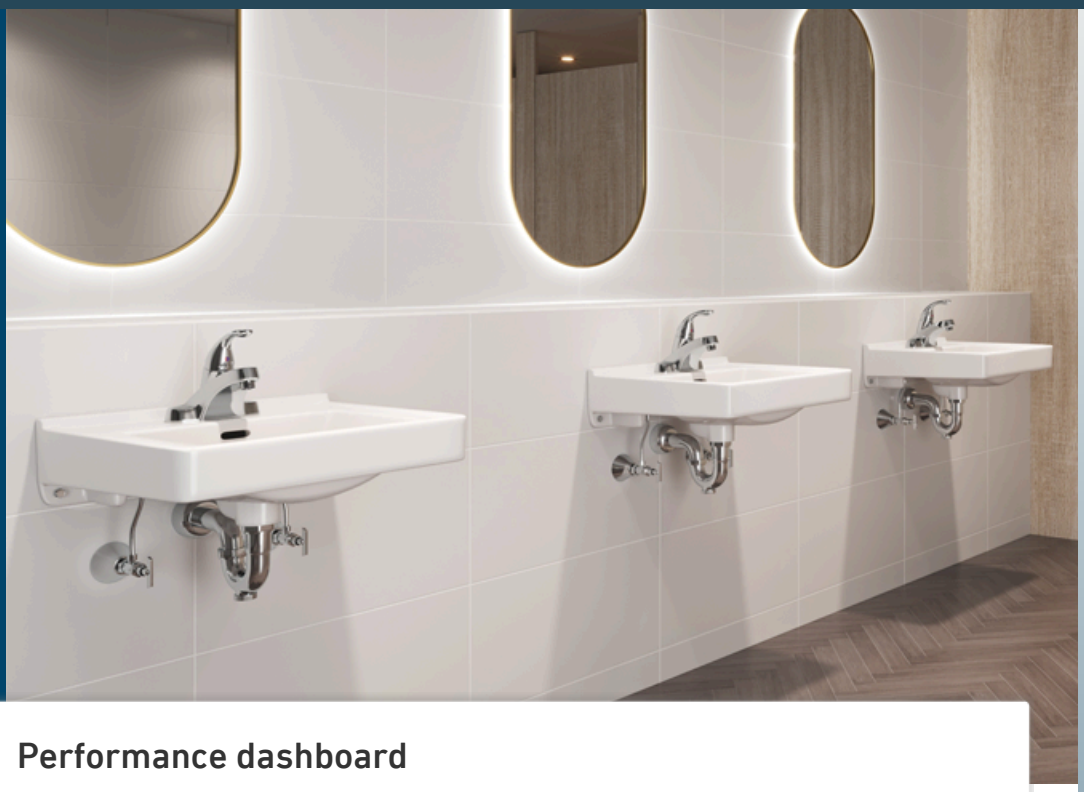
PROFLO® Single Handle Lavatory Faucet

PFWSC30075CP, PFWSC3007CP

PROFLO single handle center set bathroom sink faucet with ceramic disc cartridge in chrome finish.

When it comes to quality, PROFLO is uncompromising—treating value and performance as equals. Craftsmanship and style work hand-in-hand to deliver the best possible product. From rough products to finished fixtures, PROFLO products are developed with both presentation and performance in mind.



Performance dashboard

Features & functionality

Ceramic disc cartridge

Metal handle

3-hole 4" on-center installation

Flow rate: 0.5 gpm at 60 psi (PFWSC30075CP), 1.2 gpm at 60 psi (PFWSC3007CP)

Without pop-up drain

Visit Ferguson for more product information

PFWSC30075C
PFWSC3007CP

Environment & materials

Improved by:

cUPC/IAPMO listed

NSF/ANSI/CAN61: Q≤1

Certification & rating systems:

Certified to ASME A112.18.1 / CSA B125.1

MasterFormat® 22 42 39
PROFLO® Single Handle Lavatory Faucet
Technical Data Sheet

See LCA, interpretation & rating systems

SM Transparency Report (EPD)™

EPD	LCA
3rd-party reviewed	✓
Transparency Report (EPD)	
3rd-party verified	✓

Validity: 08/13/2024 – 08/12/2029
FER – 20240813 – 001

Material

This environmental product declaration (EPD) was externally verified by Industrial Ecology Consultants, according to ISO 21930:2017; SM Part A; SM Part B: Commercial/public metered and manual lavatory faucets; and ISO 14025:2006.

SUMMARY

Reference PCR
SM Part B: Commercial/public metered and manual lavatory faucets, v3.0

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

Functional unit
One lavatory faucet in an average

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751 Lakefront Commons
Newport News, VA 23606
(800) 221-3379

Contact us

MATERIAL HEALTH	Material evaluation
Self-declared	✔

Industrial Ecology Consultants
35 Bracebridge Rd
Newton, MA 02459
www.industrial-ecology.com

(617) 553-4929

Industrial Ecology Consultants

commercial environment over the estimated service life of the building

LCIA methodology; LCA software; LCI database
TRACI 2.1; SimaPro Analyst 9.5; ecoinvent v3.10 and US-EI 2.2 databases

Public LCA
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets

LCA results & interpretation

PROFLO® Single Handle Lavatory Faucet

Faucet (0.5gpm) | Faucet (1.2gpm) | EPD additional content

Scope and summary

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

Functional unit

One lavatory faucet in an average commercial environment over the estimated service life of the building. 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 faucet is 10 years, and one faucet weighs a total of 1.57kg.

Manufacturing data

Manufacturing data has been collected at the manufacturing facility in Vietnam for the data reporting period of 2023.

Maintenance

The cleaning of the faucet involves cleaning it 260 days per year using 10mL of a 1% sodium lauryl sulfate (SLS) solution per cleaning event for 75 years, which is the building estimated service life. The use of 10 mL/clean over 260 days per year for 75 years gives a total of 195L of solution.

Replacement

After the end of the faucet's reference service life, it is assumed to be fully replaced. An additional 6.5 replacements are included over the building's ESL of 75 years. No auxiliary materials, electricity, or other hardware components are consumed during the replacement.

What's causing the greatest impacts

All life cycle stages

Environmental performance is driven primarily by the use stage. The energy consumption during the use phase contributes to ~99% of potential CO_2-equivalent emissions across the life cycle of the faucets, with the potential CO_2-equivalent emissions from the 1.2gpm faucet about 2.4 times higher than those for the 0.5gpm faucet.

Production and installation

The production and installation stages themselves account for <1% of the impacts in most categories. The production stage accounts for ~1.4% of carcinogenics, primarily due to the processes required to manufacture the faucet.

Use

The use stage itself contributes to ~90% of the total impacts. Within the use stage, the operational energy use from heating the faucet water dominates the results for six impact categories, followed by operational water use.

Compared to the other stages, product replacements and maintenance also show relatively higher impacts across most impact categories. Maintenance impacts are driven by the use of the cleaning solution, and replacement impacts stem from having to replace the faucet every 10 years.

End of life

The end-of-life stage accounts for a relatively low portion of the results for all impact categories, at <0.1% in all categories. This is driven by the landfilling of the products at the end of their useful life.

Operational energy and water use

The energy used to heat water consumed by the faucet is included. Water heating energy is assumed to be a blend of 67% natural gas and 33% electricity, using factors of 0.1765 kWh of electricity per gallon of water and 6.571 liters of natural gas per liter of water.

The amount of water used by the faucet depends on its flow rate. The 0.5gpm faucet is assumed to be used for 10 seconds per use, with 90 uses/day and 260days/year over 75 years, resulting in 146,250 gallons of water over its lifetime. An electricity factor of 0.000961 kWh per liter of water is used to represent energy for upstream municipal water collection, treatment, supply, and downstream management.

How we're making it greener

Ferguson has established an EHS system that complies with regulations and serves to educate its team, attaching importance to environmental protection, energy savings and waste reduction, health and safety, and continuous improvement. The have implemented:

- Routine inspection and monitoring of environmental protection facilities in the production process
- Environmental monitoring plans
- Waste monitoring

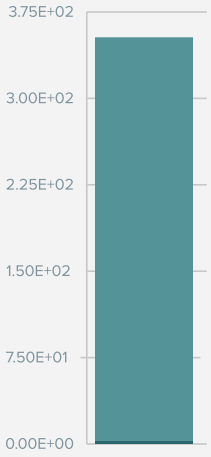
- Improvements to the level of accuracy across all operations

See how we make it greener

Material composition greater than 1% by weight

PART	MATERIAL	%WT.
Product	Zinc	35-40%
Packaging	Box	20-25%
Packaging	Pulp	12-15%
Packaging	Paper inserts, label	10-12%
Product	Brass	2-5%
Product	Polyamide	2-5%
Product	Polyethylene	2-5%

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



LIFE CYCLE STAGE	MPTS/FUNC. UNIT
Production	2.38E+00
Construction	7.00E-02
Use	3.48E+02
End of life	2.00E-02

Total impacts = 3.51E+02 mPts
per 75 years installed

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 [mPts/func unit]

Single Handle Lavatory Faucet PFWSC30075CP (0.5 gpm)	2.38 mPts	0.07 mPts	348.47 mPts	0.02 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Forming, machining, surface treatment, and polishing components into the final faucet product.	Transportation of the product to installation site or consumer and disposal of packaging.	Energy used to heat the hot water used by the faucet.	Transport to waste processing and final disposal of the faucet in a landfill.

TRACI v2.1 results per functional unit - PFWSC30075CP Faucet (0.5 gpm)

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE

Ecological damage

Impact category	Unit				
Global warming	**kg CO_2 eq**	3.80E+00	1.21E+00	3.89E+03	5.62E-01
Ozone depletion	**kg CFC-11 eq**	7.81E-08	7.68E-08	1.65E-04	2.11E-08
Acidification	**kg SO_2 eq**	4.45E-02	9.23E-03	1.61E+01	6.77E-04
Eutrophication	**kg N eq**	4.96E-03	7.94E-04	1.74E+01	1.32E-03

Human health damage

Impact category	Unit				
Smog	**kg O_3 eq**	4.29E-01	2.10E-01	1.39E+02	1.81E-02
Respiratory effects	**kg $PM_{2.5}$ eq**	4.78E-03	4.71E-04	9.54E-01	7.57E-05

Additional environmental information

Impact category	Unit				
Carcinogenics	**CTU_h**	7.80E-07	6.50E-09	5.46E-05	1.79E-09
Non-carcinogenics	**CTU_h**	8.88E-06	7.95E-08	1.04E-03	7.73E-09
Ecotoxicity	**CTU_e**	3.10E+01	1.30E+00	2.70E+03	9.74E-02
Fossil fuel depletion	**MJ surplus**	5.12E+00	1.88E+00	5.05E+03	2.08E-01

References

LCA Background Report
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets, 2024; SimaPro Analyst 9.5; ecoinvent v3; 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/public metered and manual lavatory faucets, v3.0
March, 2024. PCR reviewed for conformance to ISO 14025, ISO 21930:2017, and ACLCA PCR Open Standard v1.0 by Hugues Imbeault-Tétreault, ing., M.Sc.A., Chair (Groupe AGÉCO); Rebe Feraldi, LCACP, CLAR (TranSustainable Enterprises, LLC); Rifat Karim (Sphera)

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)™

EPD	LCA
3rd-party reviewed	✓
Transparency Report (EPD)	
3rd-party verified	✓

Validity: 08/13/2024 – 08/12/2029
FER – 20240813 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Industrial Ecology Consultants, according to ISO 21930:2017; SM Part A; SM Part B: Commercial/public metered and manual lavatory faucets; and ISO 14025:2006.

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(617) 553-4929

Industrial Ecology Consultants

SUMMARY

Reference PCR
SM Part B: Commercial/public metered and manual lavatory faucets, v3.0

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

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

LCIA methodology; LCA software; LCI database
TRACI 2.1; SimaPro Analyst 9.5; ecoinvent v3.10 and US-EI 2.2 databases

Public LCA
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets

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Contact us

LCA results & interpretation

PROFLO® Single Handle Lavatory Faucet

Faucet (0.5gpm) | Faucet (1.2gpm) | EPD additional content

Scope and summary

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

Functional unit

One lavatory faucet in an average commercial environment over the estimated service life of the building. 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 faucet is 10 years, and one faucet weighs a total of 1.57kg.

Manufacturing data

Manufacturing data has been collected at the manufacturing facility in Vietnam for the data reporting period of 2023.

Maintenance

The cleaning of the faucet involves cleaning it 260 days per year using 10mL of a 1% sodium lauryl sulfate (SLS) solution per cleaning event for 75 years, which is the building estimated service life. The use of 10 mL/clean over 260 days per year for 75 years gives a total of 195L of solution.

Replacement

After the end of the faucet's reference service life, it is assumed to be fully replaced. An additional 6.5 replacements are included over the building's ESL of 75 years. No auxiliary materials, electricity, or other hardware components are consumed during the replacement.

What's causing the greatest impacts

All life cycle stages

Environmental performance is driven primarily by the use stage. The energy consumption during the use phase contributes to ~99% of potential CO_2-equivalent emissions across the life cycle of the faucets, with the potential CO_2-equivalent emissions from the 1.2gpm faucet about 2.4 times higher than those for the 0.5gpm faucet.

Production and installation

The production and installation stages themselves account for <1% of the impacts in most categories. The production stage accounts for ~1.4% of carcinogenics, primarily due to the processes required to manufacture the faucet.

Use

The use stage itself contributes to ~90% of the total impacts. Within the use stage, the operational energy use from heating the faucet water dominates the results for six impact categories, followed by operational water use.

Compared to the other stages, product replacements and maintenance also show relatively higher impacts across most impact categories. Maintenance impacts are driven by the use of the cleaning solution, and replacement impacts stem from having to replace the faucet every 10 years.

End of life

The end-of-life stage accounts for a relatively low portion of the results for all impact categories, at <0.1% in all categories. This is driven by the landfilling of the products at the end of their useful life.

Operational energy and water use

The energy used to heat water consumed by the faucet is included. Water heating energy is assumed to be a blend of 67% natural gas and 33% electricity, using factors of 0.1765 kWh of electricity per gallon of water and 6.571 liters of natural gas per liter of water.

The amount of water used by the faucet depends on its flow rate. The 1.2gpm faucet is assumed to be used for 10 seconds per use, with 90 uses/day and 260days/year over 75 years, resulting in 351,000 gallons of water over its lifetime. An electricity factor of 0.000961 kWh per liter of water is used to represent energy for upstream municipal water collection, treatment, supply, and downstream management.

How we're making it greener

Ferguson has established an EHS system that complies with regulations and serves to educate its team, attaching importance to environmental protection, energy savings and waste reduction, health and safety, and continuous improvement. The have implemented:

- Routine inspection and monitoring of environmental protection facilities in the production process
- Environmental monitoring plans
- Waste monitoring

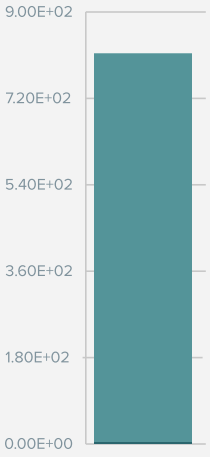
- Improvements to the level of accuracy across all operations

See how we make it greener

Material composition greater than 1% by weight

PART	MATERIAL	%WT.
Product	Zinc	35-40%
Packaging	Box	20-25%
Packaging	Pulp	12-15%
Packaging	Paper inserts, label	10-12%
Product	Brass	2-5%
Product	Polyamide	2-5%
Product	Polyethylene	2-5%

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



LIFE CYCLE STAGE	MPTS/FUNC. UNIT
Production	2.38E+00
Construction	9.00E-02
Use	8.11E+02
End of life	2.00E-02

Total impacts = 8.13E+02 mPts
per 75 years installed

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 [mPts/func unit]

Single Handle Lavatory Faucet PFWSC3007CP (1.2 gpm)	2.38 mPts	0.09 mPts	810.57 mPts	0.02 mPts
Materials or processes contributing >20% to total impacts in each life cycle stage	Forming, machining, surface treatment, and polishing components into the final faucet product.	Transportation of the product to installation site or consumer and disposal of packaging.	Energy used to heat the hot water used by the faucet.	Transport to waste processing and final disposal of the faucet in a landfill.

TRACI v2.1 results per functional unit - PFWSC3007CP Faucet (1.2 gpm)

LIFE CYCLE STAGE	PRODUCTION	CONSTRUCTION	USE	END OF LIFE

Ecological damage

Impact category	Unit				
Global warming	**kg CO_2 eq**	3.80E+00	1.21E+00	9.27E+03	5.62E-01
Ozone depletion	**kg CFC-11 eq**	7.81E-08	7.68E-08	3.95E-04	2.11E-08
Acidification	**kg SO_2 eq**	4.45E-02	9.23E-03	3.82E+01	6.77E-04
Eutrophication	**kg N eq**	4.96E-03	7.94E-04	4.16E+01	1.32E-03

Human health damage

Impact category	Unit				
Smog	**kg O_3 eq**	4.29E-01	2.10E-01	3.27E+02	1.81E-02
Respiratory effects	**kg $PM_{2.5}$ eq**	4.78E-03	4.71E-04	2.23E+00	7.57E-05

Additional environmental information

Impact category	Unit				
Carcinogenics	**CTU_h**	7.80E-07	6.50E-09	1.23E-04	1.79E-09
Non-carcinogenics	**CTU_h**	8.88E-06	7.95E-08	2.42E-03	7.73E-09
Ecotoxicity	**CTU_e**	3.10E+01	1.30E+00	5.94E+03	9.74E-02
Fossil fuel depletion	**MJ surplus**	5.12E+00	1.88E+00	1.21E+04	2.08E-01

References

LCA Background Report
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets, 2024; SimaPro Analyst 9.5; ecoinvent v3; 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/public metered and manual lavatory faucets, v3.0
March, 2024. PCR reviewed for conformance to ISO 14025, ISO 21930:2017, and ACLCA PCR Open Standard v1.0 by Hugues Imbeault-Tétreault, ing., M.Sc.A., Chair (Groupe AGÉCO); Rebe Feraldi, LCACP, CLAR (TranSustainable Enterprises, LLC); Rifat Karim (Sphera)

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Rating systems

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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)™

EPD	LCA
3rd-party reviewed	✓
Transparency Report (EPD)	
3rd-party verified	✓

Validity: 08/13/2024 – 08/12/2029
FER – 20240813 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Industrial Ecology Consultants, according to ISO 21930:2017; SM Part A; SM Part B: Commercial/public metered and manual lavatory faucets; and ISO 14025:2006.

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Industrial Ecology Consultants

SUMMARY

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

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

LCIA methodology; LCA software; LCI database
TRACI 2.1; SimaPro Analyst 9.5; ecoinvent v3.10 and US-EI 2.2 databases

Public LCA
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets

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Contact us

EPD additional content

PROFLO® Single Handle Lavatory Faucet

Faucet (0.5gpm) | Faucet (1.2gpm) | EPD additional content

Data

Background This product-specific plant-specific declaration was created by collecting production data from the Vietnam facility. All unit processes were modeled using primary data from Ferguson's outsourced manufacturing facilities in combination with their internal operations 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.

Allocation of multi-input and multi-output processes follows 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. No known flows are deliberately excluded from this declaration, and no substances considered to be hazardous or toxic according to the TRI or local regulations are present in the products. Therefore, these criteria have been met. Biogenic carbon is included in reported results.

Major system boundary exclusions

- Construction of major capital equipment
- Maintenance and operation of support equipment
- Human labor and employee transport
- Manufacture and transport of packaging materials not associated with the final product
- Disposal of packaging materials not associated with the final product
- Building operational energy and water use

Flow diagram

Scenarios and additional technical information

Distribution [A4]

Faucets manufactured in Vietnam are first shipped to Ferguson's distribution center in Perris, California and then distributed to other distribution centers in the US, which are then transported to end users and building sites.

Distribution method	PFWSC30075CP	PFWSC3007CP
Manufacturing facility to Ferguson DCs		
Road transport (average)	3,161 km	
Sea transport	13,316 km	
Transport to end users		
Road transport (average)	910 km	1,932 km

Installation [A5]

Installation of faucets is manual, and the resulting packaging waste is assumed to be transported 100 km to final disposal. Disposal scenarios for packaging are assumed to be 80.88% recycled, 15.37% landfilled, and the remaining incinerated, in alignment with US EPA's 2018 end of life data for containers and packaging.

End-of-life [C1-C4]

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

Product information

Product SKU	Product specification	Description
PFWSC30075CP	ADA compliant cUPC/IAPMO listed NSF/ANSI/CAN61: Q≤1 Certified to ASME A112.18.1 / CSA B125.1	PROFLO® Single Handle Centerset Bathroom Sink Faucet Less Pop-Up Drain Assembly in Chrome (0.5 gpm)
PFWSC3007CP		PROFLO® Single Handle Centerset Bathroom Sink Faucet Less Pop-Up Drain Assembly in Chrome (1.2 gpm)

Major assumptions and limitations

- Since energy and resource inputs were not available on a per-product basis, electricity and other resources consumed in the faucet manufacturing facility were allocated proportionately based on the volumetric share of faucets analyzed to the total faucets produced. It was

later scaled down per faucet using the total production units of faucets studied.

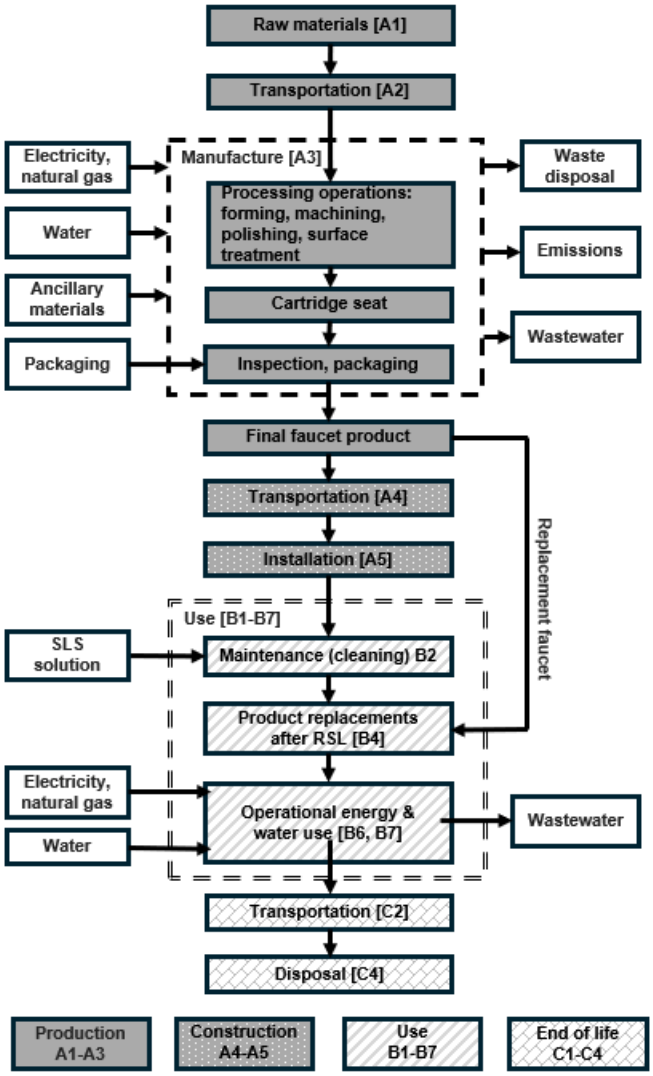
- Generic data sets used for material inputs, transportation, and waste processing are considered good quality, but actual impacts from material suppliers, transport carriers, and local waste processing may vary.

Data quality assessment

Precision: As the relevant foreground data is primary data or modeled based on primary information from the owner of the technology, precision is considered to be high. Background data is from the ecoinvent v3.10 and US-EI 2.2 databases with documented precision to the extent available.

Completeness: The product system was checked for mass balance and completeness of the inventory. The data included is considered complete based on our understanding of the manufacturing site and a review with key stakeholders on the Ferguson team, and cut-off criteria were observed consistent with those prescribed in the PCR. Besides capital equipment, no data was knowingly omitted.

Consistency: The consistency of the model is considered high. Primary data were collected with a similar level of detail, while background data were sourced primarily from the ecoinvent database. Other databases were used if data were not available in ecoinvent or the data set was judged to be more representative.



PFWSC30075CP Faucet (0.5 gpm) - Resource use, output and waste flows, and carbon emissions & removals per functional unit

Parameters	Unit	A1-A3	A4-A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	Total
Resource use indicators												
Renewable primary energy used as energy carrier (RPR_E)	MJ, NCV	2.14E+01	2.73E-02	0	1.66E+02	0	1.40E+02	0	4.92E+03	7.10E+02	1.25E-02	**5.96E+03**
Renewable primary resources with energy content used as material (RPR_M)	MJ, NCV	8.96E+00	0	0	0	0	5.82E+01	0	0	0	0	**6.72E+01**
Total use of renewable primary resources with energy content (RPR_{total})	MJ, NCV	3.04E+01	2.73E-02	0	1.66E+02	0	1.98E+02	0	4.92E+03	7.10E+02	1.25E-02	**6.02E+03**
Non-renewable primary resources used as an energy carrier ($NRPR_E$)	MJ, NCV	5.17E+01	1.34E+01	0	3.53E+01	0	4.29E+02	0	6.08E+04	6.99E+03	1.52E+00	**6.84E+04**
Non-renewable primary resources with energy content used as material ($NRPR_M$)	MJ, NCV	5.41E+00	0	0	0	0	3.89E+01	0	0	0	0	**4.06E+01**
Total use of non-renewable primary resources with energy content ($NRPR_{total}$)	MJ, NCV	5.71E+01	1.34E+01	0	3.53E+01	0	4.68E+02	0	6.08E+04	6.99E+03	1.52E+00	**6.84E+04**
Secondary materials (SM)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Renewable secondary fuels (RSF)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**
Non-renewable secondary fuels (NRSF)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**
Recovered energy (RE)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**

Use of net fresh water resources (FW)	m^3	2.81E+01	2.38E-02	0	1.08E+01	0	1.83E+02	0	1.75E+02	6.34E+02	3.65E-04	**1.03E+03**
Output flows and waste category indicators												
Hazardous waste disposed (HWD)	kg	4.58E-02	0	0	0	0	2.98E-01	0	0	0	0	**3.44E-01**
Non-hazardous waste disposed (NHWD)	kg	2.73E-02	1.20E-01	0	0	0	6.11E+00	0	0	0	7.93E-01	**7.05E+00**
High-level radioactive waste, conditioned, to final repository (HLRW)	kg	4.54E-03	8.45E-06	0	4.18E-04	0	2.96E-02	0	7.49E-01	8.76E-02	1.63E-06	**8.71E-01**
Intermediate- and low-level radioactive waste, conditioned, to final repository (ILLRW)	kg	1.65E-03	1.82E-05	0	3.31E-04	0	1.09E-02	0	2.49E+00	2.94E-01	5.43E-06	**2.80E+00**
Components for re-use (CRU)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Materials for recycling (MR)	kg	0	4.73E+00	0	4.74E+00	0	4.10E+00	0	0	0	0	**4.74E+00**
Materials for energy recovery (MER)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Exported energy (EE)	MJ	0	0	0	0	0	0	0	0	0	0	**0**
Carbon emissions and removals												
Biogenic Carbon Removal from Product (BCRP)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Emission from Product (BCEP)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Removal from Packaging (BCRK)	kg CO_2	1.44E+00	0	0	0	0	9.33E+00	0	0	0	0	**1.08E+01**
Biogenic Carbon Emission from Packaging (BCEK)	kg CO_2	0	1.21E+00	0	0	0	7.89E+00	0	0	0	1.04E-03	**9.10E+00**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes (BCEW)	kg CO_2	0	5.37E-02	0	0	0	3.49E-01	0	0	0	0	**4.03E-01**
Calcination Carbon Emissions (CCE)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Carbonation Carbon Removals (CCR)	kg CO_2	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 CO_2	0	0	0	0	0	0	0	0	0	0	**0**

PFWSC3007CP Faucet (1.2 gpm) - Resource use, output and waste flows, and carbon emissions & removals per functional unit

Parameters	Unit	A1-A3	A4-A5	B1	B2	B3	B4	B5	B6	B7	C1-C4	Total
Resource use indicators												
Renewable primary energy used as energy carrier (RPR_E)	MJ, NCV	2.14E+01	4.48E-03	0	1.66E+02	0	1.40E+02	0	1.18E+04	1.70E+03	1.25E-02	**1.38E+04**
Renewable primary resources with energy content used as material (RPR_M)	MJ, NCV	8.96E+00	0	0	0	0	5.82E+01	0	0	0	0	**6.72E+01**
Total use of renewable primary resources with energy content (RPR_{total})	MJ, NCV	3.04E+01	4.48E-03	0	1.66E+02	0	1.98E+02	0	1.18E+04	1.70E+03	1.25E-02	**1.39E+04**
Non-renewable primary resources used as an energy carrier ($NRPR_E$)	MJ, NCV	5.17E+01	1.37E+00	0	3.53E+01	0	4.55E+02	0	1.46E+05	1.68E+04	1.52E+00	**1.63E+05**
Non-renewable primary resources with energy content used as material ($NRPR_M$)	MJ, NCV	5.41E+00	0	0	0	0	3.89E+01	0	0	0	0	**4.06E+01**

Total use of non-renewable primary resources with energy content ($NRPR_{total}$)	MJ, NCV	5.71E+01	1.37E+00	0	3.53E+01	0	4.93E+02	0	1.46E+05	1.68E+04	1.52E+00	**1.63E+05**
Secondary materials (SM)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Renewable secondary fuels (RSF)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**
Non-renewable secondary fuels (NRSF)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**
Recovered energy (RE)	MJ, NCV	0	0	0	0	0	0	0	0	0	0	**0**
Use of net fresh water resources (FW)	m^3	2.81E+01	3.17E-04	0	1.08E+01	0	1.83E+02	0	1.75E+02	6.34E+02	3.65E-04	**2.16E+03**
Output flows and waste category indicators												
Hazardous waste disposed (HWD)	kg	4.58E-02	0	0	0	0	2.98E-01	0	0	0	0	**3.44E-01**
Non-hazardous waste disposed (NHWD)	kg	2.73E-02	1.20E-01	0	0	0	6.11E+00	0	0	0	7.93E-01	**7.05E+00**
High-level radioactive waste, conditioned, to final repository (HLRW)	kg	4.54E-03	6.89E-07	0	4.18E-04	0	2.96E-02	0	1.80E+00	2.10E-01	1.63E-06	**2.04E+00**
Intermediate- and low-level radioactive waste, conditioned, to final repository (ILLRW)	kg	1.65E-03	2.26E-06	0	3.31E-04	0	1.09E-02	0	5.98E+00	7.05E-01	5.43E-06	**6.70E+00**
Components for re-use (CRU)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Materials for recycling (MR)	kg	0	4.10E+00	0	4.74E+00	0	4.10E+00	0	0	0	0	**4.74E+00**
Materials for energy recovery (MER)	kg	0	0	0	0	0	0	0	0	0	0	**0**
Exported energy (EE)	MJ	0	0	0	0	0	0	0	0	0	0	**0**
Carbon emissions and removals												
Biogenic Carbon Removal from Product (BCRP)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Emission from Product (BCEP)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Biogenic Carbon Removal from Packaging (BCRK)	kg CO_2	1.44E+00	0	0	0	0	9.33E+00	0	0	0	0	**1.08E+01**
Biogenic Carbon Emission from Packaging (BCEK)	kg CO_2	0	1.21E+00	0	0	0	7.89E+00	0	0	0	1.04E-03	**9.10E+00**
Biogenic Carbon Emission from Combustion of Waste from Renewable Sources Used in Production Processes (CBCEW)	kg CO_2	0	5.37E-02	0	0	0	3.49E-01	0	0	0	0	**4.03E-01**
Calcination Carbon Emissions (CCE)	kg CO_2	0	0	0	0	0	0	0	0	0	0	**0**
Carbonation Carbon Removals (CCR)	kg CO_2	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 CO_2	0	0	0	0	0	0	0	0	0	0	**0**

PFWSC30075CP Faucet (0.5 gpm) - LCIA results per functional unit

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	Total
Ozone depletion	kg CFC-11 eq	7.81E-08	5.69E-08	1.99E-08	0	8.01E-08	0	1.14E-06	0	1.38E-04	2.56E-05	0	2.00E-08	0	1.08E-09	**1.65E-04**
Global warming	kg CO2 eq	3.80E+00	9.31E-01	2.81E-01	0	4.73E+00	0	3.62E+01	0	3.41E+03	4.37E+02	0	9.98E-02	0	4.62E-01	**3.89E+03**

Smog	kg O3 eq	4.29E-01	1.93E-01	1.66E-02	0	3.13E-01	0	4.27E+00	0	1.11E+02	2.39E+01	0	1.62E-02	0	1.86E-03	**1.40E+02**
Acidification	kg SO2 eq	4.45E-02	8.64E-03	5.91E-04	0	4.91E-02	0	3.54E-01	0	1.30E+01	2.73E+00	0	5.51E-04	0	1.26E-04	**1.62E+01**
Eutrophication	kg N eq	4.96E-03	4.59E-04	3.35E-04	0	6.68E-02	0	4.59E-02	0	1.06E+00	1.62E+01	0	5.64E-05	0	1.26E-03	**1.74E+01**
Carcinogenics	CTUh	7.80E-07	6.29E-09	2.07E-10	0	1.35E-07	0	5.13E-06	0	6.26E-06	4.31E-05	0	2.85E-11	0	1.76E-09	**5.54E-05**
Non-carcinogenics	CTUh	8.88E-06	7.34E-08	6.10E-09	0	6.64E-06	0	5.83E-05	0	1.02E-04	8.77E-04	0	4.76E-09	0	2.97E-09	**1.05E-03**
Respiratory effects	kg PM2.5 eq	4.78E-03	4.04E-04	6.66E-05	0	7.50E-03	0	3.46E-02	0	7.70E-01	1.42E-01	0	6.43E-05	0	1.14E-05	**9.59E-01**
Additional environmental information																
Ecotoxicity	CTUe	3.10E+01	1.28E+00	1.85E-02	0	1.78E+02	0	2.10E+02	0	2.49E+02	2.06E+03	0	1.28E-02	0	8.46E-02	**2.73E+03**
Fossil fuel depletion	MJ surplus	5.12E+00	1.69E+00	1.93E-01	0	2.64E+00	0	4.69E+01	0	4.50E+03	5.03E+02	0	1.92E-01	0	1.63E-02	**5.05E+03**

PFWSC3007CP Faucet (1.2 gpm) - LCIA results per functional unit

Impact category	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	Total
Ozone depletion	kg CFC-11 eq	7.81E-08	5.69E-08	1.99E-08	0	8.01E-08	0	1.14E-06	0	3.32E-04	6.15E-05	0	2.00E-08	0	1.08E-09	**3.96E-04**
Global warming	kg CO2 eq	3.80E+00	9.31E-01	2.81E-01	0	4.73E+00	0	3.62E+01	0	8.18E+03	1.05E+03	0	9.98E-02	0	4.62E-01	**9.27E+03**
Smog	kg O3 eq	4.29E-01	1.93E-01	1.66E-02	0	3.13E-01	0	4.27E+00	0	2.65E+02	5.73E+01	0	1.62E-02	0	1.86E-03	**3.28E+02**
Acidification	kg SO2 eq	4.45E-02	8.64E-03	5.91E-04	0	4.91E-02	0	3.54E-01	0	3.12E+01	6.56E+00	0	5.51E-04	0	1.26E-04	**3.82E+01**
Eutrophication	kg N eq	4.96E-03	4.59E-04	3.35E-04	0	6.68E-02	0	4.59E-02	0	2.54E+00	3.89E+01	0	5.64E-05	0	1.26E-03	**4.16E+01**
Carcinogenics	CTUh	7.80E-07	6.29E-09	2.07E-10	0	1.35E-07	0	5.13E-06	0	1.50E-05	1.03E-04	0	2.85E-11	0	1.76E-09	**1.25E-04**
Non-carcinogenics	CTUh	8.88E-06	7.34E-08	6.10E-09	0	6.64E-06	0	5.83E-05	0	2.46E-04	2.11E-03	0	4.76E-09	0	2.97E-09	**2.43E-03**
Respiratory effects	kg PM2.5 eq	4.78E-03	4.04E-04	6.66E-05	0	7.50E-03	0	3.46E-02	0	1.85E+00	3.41E-01	0	6.43E-05	0	1.14E-05	**2.24E+00**
Additional environmental information																
Ecotoxicity	CTUe	3.10E+01	1.28E+00	1.85E-02	0	1.78E+02	0	2.10E+02	0	5.98E+02	4.95E+03	0	1.28E-02	0	8.46E-02	**5.97E+03**
Fossil fuel depletion	MJ surplus	5.12E+00	1.69E+00	1.93E-01	0	2.64E+00	0	4.69E+01	0	1.08E+04	1.21E+03	0	1.92E-01	0	1.63E-02	**1.21E+00**

How we make it greener

PROFLO® Single Handle Lavatory Faucet

Expand all

PRODUCTION

Copper and zinc scrap generated during faucet manufacturing is processed into pipings, forged material, cold rolled material, low pressure casting copper material, spout, zinc slag, scrap zinc alloy parts, and casted parts according to different material type in order to centralize collection and improve the ease and rate of recycling.

Current Ferguson production processes mainly use natural gas. However, the use of solar power is under consideration to promote sustainable development. For example, the local government in the area where the toilet production facility is located has begun the construction of solar power generation systems, which will be used in the production of its sanitary ceramics in order to reduce the use of natural gas and other energy inputs. Ferguson is looking into adopting this practice at its faucet production facilities as well.

TRANSPORTATION

Ferguson is making efforts to reduce the total transportation distance required for its upstream transportation and distribution activities. These efforts include local sourcing and the use of multiple distribution centers.

Local sourcing is being used not only for the smaller components used in faucet production, but also for Ferguson's largest raw material purchases for its other products. For example, the main raw materials used in sanitary ceramic production are washed mud, feldspar, and porcelain stone powder. These raw materials are sourced from locations close to the manufacturing facility, and the port for shipment to the US is close by.

END OF LIFE

Ferguson is working to make end-of-life disposal pathways more sustainable not only for faucets, but for all its product offerings across multiple product categories. For example, waste sanitary ceramics can be broken into ceramic fragments or powder, which can be used to manufacture building materials such as ceramic tile adhesives and cement additives.

Processing waste sanitary ceramics into fine particles can produce raw materials for the production of green building materials, such as concrete additives used for environmentally friendly lightweight partition panels, road bricks, etc. While this is not yet commonplace, these practices would reduce the emissions associated with landfill and improve the potential environmental performance of building materials.

EPD	LCA
3rd-party reviewed	✓

Transparency Report (EPD)

3rd-party verified	✓

Validity: 08/13/2024 – 08/12/2029
FER – 20240813 – 001

MATERIAL HEALTH	Material evaluation
Self-declared	✓

This environmental product declaration (EPD) was externally verified by Industrial Ecology Consultants, according to ISO 21930:2017; SM Part A; SM Part B: Commercial/public metered and manual lavatory faucets; and ISO 14025:2006.

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Industrial Ecology Consultants

SUMMARY

Reference PCR
SM Part B: Commercial/public metered and manual lavatory faucets, v3.0

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

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

LCIA methodology; LCA software; LCI database
TRACI 2.1; SimaPro Analyst 9.5; ecoinvent v3.10 and US-EI 2.2 databases

Public LCA
LCA background report of Ferguson single handle lavatory faucets & residential two-piece toilets

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