



WaterSense® Specification for Tank-Type Toilets

Version ~~4.2.0~~ 4.2.0 (Draft)

~~June 2, 2014~~
December 2023

WaterSense® Specification for Tank-Type Toilets

1.0 Scope and Objective

This specification establishes the criteria for a tank-type high-efficiency toilet under the U.S. Environmental Protection Agency's (EPA's) WaterSense program. It is applicable to [single-flush and dual-flush tank-type toilets, including:](#)

- [Tank-type gravity toilets](#)
- ~~Dual flush, tank type gravity toilets~~
- ~~Dual flush, tank~~[Tank](#)-type flushometer tank (pressure-assist) toilets
- ~~Tank type, flushometer tank (pressure assist) toilets~~
- Tank-type electrohydraulic toilets
- [Combination in-wall toilet carrier systems and wall hung bowls](#)
- Any other tank-type technologies that meet these performance specifications

[Toilets using tanks with adjustable water use settings that can be identified and activated by a user or plumbing professional to override the rated flush volume, as established by this specification, do not comply with the intent of this specification and are not eligible to earn of the WaterSense label.](#)

The specification is designed to ensure both sustainable, efficient water use and a high level of user satisfaction with flushing performance.

2.0 General Requirements

- 2.1 The toilet shall conform to applicable water closet requirements in [American Society of Mechanical Engineers \(ASME\) A112.19.2/Canadian Standards Association \(CSA\) B45.1 Ceramic Plumbing Fixtures](#),¹ except as otherwise indicated in this specification.

~~2.2 If the toilet has dual flush capabilities, it shall conform to requirements in ASME A112.19.14.~~

3.0 Water Efficiency Criteria

[Water consumption shall be tested in accordance with ASME A112.19.2/CSA B45.1.](#)

- 3.1 ~~Single-flush toilets:~~ The ~~effective~~[manufacturer shall specify a rated](#) flush volume [for the toilet, which](#) shall not exceed 1.28 gallons [per flush \(gpf; 4.8 liters per flush \[Lpf\]\)](#). The [water consumption, determined through testing and](#) ~~when~~ evaluated in accordance with the sampling plan contained in 10 CFR 429.30, shall not exceed [the rated flush volume. 1.28 gallons \(4.8 liters\) when evaluated in accordance with the sampling plan contained in 10 CFR 429.30.](#) For dual-flush toilets, ~~the effective flush volume is the average flush volume of two reduced~~

¹ References to this and other standards apply to the most current version of that standard.

~~flushes and one full flush. Flush volumes shall be tested in accordance with ASME A112.19.2/CSA B45.1 and ASME A112.19.14.~~

3.2 For toilets with dual-flush capabilities, the manufacturer shall specify the rated flush volume of both the full-flush and reduced-flush modes, and the requirements of Section 3.1 shall apply.

~~3.23.3~~ Samples with average flush volume in excess of 0.10 gallon (0.4 liter) greater than their rated flush volume shall be deemed to fail testing requirements due to excessive flush volume.²

~~3.33.4~~ Samples with average flush volumes less than or equal to 0.10 gallon (0.4 liter) greater than their rated flush volume shall be adjusted, if possible, to their rated flush volume prior to performance testing.

~~3.43.5~~ Samples with average flush volumes less than their rated flush volume shall be tested at measured volume, and this volume shall be recorded on the test report.

4.0 Flush Performance Criteria

4.1 Toilet model performance is identified as either a “pass” or “fail” depending upon whether it can successfully and completely clear all test media from the fixture in a single flush in at least four of five attempts. Flush performance testing shall be conducted in accordance with the waste extraction test protocol provided in ASME A112.19.2/CSA B45.1.

5.0 Product Marking and Documentation

5.1 Toilet fixtures shall be marked in accordance with requirements in ASME A112.19.2/CSA B45.1 ~~with the exception identified in Section 5.1.1 below.~~

~~5.1.1 Toilet bowls intended to be used with tanks of varying consumption levels (e.g., 1.6 and 1.28 gallons per flush) shall be marked with a dual consumption marking or a consumption range, as indicated in ASME A112.19.2/CSA B45.1; however, toilet bowls shall not be marked with the words “or less” to indicate compatibility with tanks of varying consumption levels.~~

5.2 Toilet tanks shall not be packaged, marked, nor provided with instructions directing the user to an alternative water use setting that would override the rated flush volume, as established by this specification. Any instruction related to the maintenance of the product shall direct the user include information on how to return the product to its rated flush volume.

² For example, ~~fixtures/toilets~~ rated at 1.28 gallons per flush/gpf (the maximum flush volume) but flushing at greater than 1.38 gallons/gpf (5.2 liter/Lpf) when adjusted in accordance with the water consumption test procedure in ASME A112.19.2/CSA B45.1 shall be deemed to have “failed” the requirements of this specification.

5.3 Where a toilet tank and bowl are packaged individually and/or sold separately, the following product packaging and documentation requirements apply:

5.3.1 If both the tank and bowl are manufactured by the same company, or the tank manufacturer and the bowl manufacturer each obtain individual certification listings for a toilet combination:

- The toilet tank and toilet bowl packaging must bear the WaterSense label.
- Toilet bowl packaging must indicate all the specific brand names, model names, and model numbers, as applicable, of the counterpart tanks it can be used with to form a WaterSense labeled tank-type toilet. For example, the toilet bowl packaging might say:

"This [insert description of bowl] is WaterSense labeled when used with [list brand names, model names, and model numbers, as applicable, of the tank(s) that the bowl can be combined with to form a WaterSense labeled tank-type toilet]."

- Product specification sheets or other product documentation for both the toilet tank and bowl must indicate all the specific brand names, model names, and model numbers, as applicable, of the counterpart products (e.g., the bowl or tank) that the product can be used with to form a WaterSense labeled tank-type toilet.

5.3.2 If only one manufacturer (e.g., the tank manufacturer or the bowl manufacturer) obtains a certification listing for a toilet combination:

- Only the manufacturer that maintains the toilet tank and bowl combination's certification listing may use the WaterSense label on product packaging and product specification sheets.
- The manufacturer that maintains the listing must indicate on product specification sheets or other product documentation the specific brand names, model names, and model numbers, as applicable, of the counterpart products (i.e., the bowl or tank) that the product can be used with to form a WaterSense labeled tank-type toilet.
- Toilet bowl packaging is not required to indicate all the specific brand names, model names, and model numbers, as applicable, of the counterpart tanks it can be used with to form a WaterSense labeled tank-type toilet.

- The manufacturer of the component that is included in the combination but that does not maintain the certification listing is not permitted to use the WaterSense label and does not need to meet the product packaging marking and labeling criteria specified in this section.

6.0 Effective Date

This specification is effective on June 2, 2014 as of [DATE]. Appendix B provides information on activities related to the transition to Version 2.0 of this specification.

7.0 Future Specification Revisions

EPA reserves the right to revise this specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. Revisions to the specification would be made following discussions with industry partners and other interested stakeholders parties.

8.0 Definitions

Definitions within ASME A112.19.2/CSA B45.1 and ASME A112.19.14 are included by reference.

- **Pressure-assist toilet:** A water closet that uses a flushometer tank as a flushing device, as defined in ASME A112.19.2/CSA B45.1.
- **Rated flush volume:** The maximum flush volume, as specified by the manufacturer, verified through testing and in compliance with this specification.

Appendix A: ~~Requirements~~Informative Annex for WaterSense Labeling

The following requirements must be met for products to ~~be~~earn the WaterSense label.

1.0 WaterSense Partnership

The manufacturer³ of the product must have a signed [WaterSense](#) partnership agreement in place with EPA.

2.0 Conformity Assessment

- 2.1 Conformance to this specification must be certified by an EPA licensed certifying body accredited for this specification in accordance with the *WaterSense Product Certification System*.

~~1.0~~ Clarifications

~~3.1~~ Adjustability

~~Toilet tanks with adjustable water use settings that can be identified and activated by a user or plumbing professional to override the rated flush volume, as established by this specification, do not comply with the intent of this specification or the WaterSense program and do not qualify for use of the WaterSense label.~~

~~3.2~~ Tanks and Bowls Manufactured and Sold by Different Companies

2.2 Combinations of In-wall Carrier Systems and Wall Hung Bowls

~~WaterSenseEPA~~ requires every combination tank and bowl to be tested and certified for conformance to this specification in order to ensure that the toilet as a whole provides the expected water efficiency and performance. Wall hung bowls and in-wall carrier systems and wall-hung bowls manufactured and sold by different companies can earn the WaterSense label, provided that the combination unit is tested and certified. ~~However, since these products might not necessarily be sold as a unit, WaterSense has established some additional certification requirements that these products must meet in order to earn the WaterSense label. Both manufacturers must agree to have their products tested and certified together in order for the tank and bowl combination to receive the WaterSense label.~~

³Manufacturer, as defined in the WaterSense program guidelines, means: "Any organization that produces a product for market that might be eligible to meet WaterSense criteria for efficiency and performance. Manufacturers can also produce 'private label' products that are sold under the brand name of a separate organization, which is treated as a separate partner/application from the original product manufacturer." In the case of private labeling, the private labeling organization that ultimately brands the product for sale must have a signed WaterSense partnership agreement in place with EPA.

Certification Listing

~~In order to~~ To control the use of the WaterSense label while promoting flexibility, EPA is only requiring each one manufacturer (e.g., the tank manufacturer and/or the bowl manufacturer) to obtain a certification listing with one of EPA's licensed certifying bodies to show that the toilet, formed by the combination tank and bowl, was certified for conformance to the specification of a tank and a bowl, was certified for conformance to the specification. The certification listing must identify the product information, as required by the specification and product notification template (PNT), under which both components are sold. Within the PNT, the identifying information for each component of the combination will only be entered once, under the name of the manufacturer maintaining the certification listing. The manufacturer that maintains a certification listing will be authorized to use the WaterSense label in association with its component product as described in the *WaterSense Program Mark Guidelines* and further clarified in Section 5.0: Product Marking and Documentation of this specification. Combinations of tanks and bowls in the WaterSense Product Search Tool will also only be searchable under the brand name of the manufacturer that maintains the certification listing.

If both the tank manufacturer and the bowl manufacturer submit a toilet combination for testing and certification, both manufacturers will obtain individual certification listings for the toilet combination. The listings must identify both components, along with the respective manufacturers' names, brand names, model names, and model numbers by which the products are identified and sold. Separate listings will allow the licensed certifying body to directly authorize each manufacturer to use the WaterSense label on their tanks or bowls. Note that though if both manufacturers obtain individual certification listing is required for each manufacturer listings, WaterSense is not requiring the combination toilet to be tested more than once. The licensed certifying body must ensure that the listing information is complete prior to issuing the certification and the WaterSense label to either manufacturer.

~~As an alternative to separate listings, and at the discretion of the licensed certifying body, the manufacturer of one of the components (e.g., either the tank or bowl manufacturer) can become listed as an additional company under the certification listing of the manufacturer of the corresponding component (e.g., the bowl or tank). However, both components, along with the respective manufacturer's names, brand names, model names, and model numbers by which the products are identified and sold, must be identified under both the certification file owner's listing and the additional company's listing. This will ensure that there is no confusion about which products were certified in combination to earn the WaterSense label.~~

~~3.3~~ *Product Packaging Marking and Labeling*

~~Though every combination tank and bowl must be tested and certified for conformance to this specification in order to ensure that the toilet as a whole provides the expected water efficiency and performance, in some cases the tank and bowl might be packaged~~

~~individually and/or sold separately. To ensure that it is clear to the purchaser that a particular combination tank and bowl is labeled, EPA is providing clarification regarding how the packaging must be marked and how the WaterSense label must be used. These marking and labeling requirements apply to tanks and bowls made by the same company and those made by different companies, as is the case for some wall-hung bowls and in-wall carrier systems.~~

~~Manufacturers must adhere to the following product packaging marking and labeling requirements for toilet tanks and bowls packaged and sold individually:~~

- ~~• In all cases, the toilet tank and toilet bowl packaging must bear the WaterSense label.~~
- ~~• Toilet bowl packaging must indicate all of the specific brand names, model names, and model numbers, as applicable, of the counterpart tanks it can be used with to form a WaterSense labeled tank-type toilet. For example, the toilet bowl packaging might say:~~

~~“This [insert description of bowl] is WaterSense labeled when used with [list brand names, model names, and model numbers, as applicable, of the tank(s) that the bowl can be used with to form a WaterSense labeled tank-type toilet].”~~

- ~~• Product specification sheets or other product documentation for both the toilet tank and bowl must indicate all of the specific brand names, model names, and model numbers, as applicable, of the counterpart products (e.g., the bowl or tank) that the product can be used with to form a WaterSense labeled tank-type toilet.~~

~~Note that for toilet tanks and bowls packaged and sold together as a unit, the packaging must bear the WaterSense label.~~

3.0 WaterSense Label Use

3.1 Per the *WaterSense Program Mark Guidelines*, manufacturers must include the WaterSense label on product packaging and in online and printed specification sheets. Manufacturers should display the WaterSense label in association with any labeled product on the organization’s website.

Appendix B: Transition Period for Version 2.0 of the Specification

The revisions included in Version 2.0 of this specification will impact the certification status of dual-flush toilets with a full-flush volume over 1.28 gpf. Otherwise, EPA anticipates that the revisions will not impact the certification status and will not require the retesting or recertification of single-flush toilets or dual-flush toilets that have a full-flush volume less than or equal to 1.28 gpf. Further, the revisions will not impact the current licensing status of certifying bodies, and EPA will not require edits to licensing agreements or licensing agreement amendments currently in effect.

While the effective date of the specification is dependent on the future publication date for the final specification, EPA anticipates that the specification will take effect approximately six months following publication. Manufacturers may begin delisting ineligible products from their certification listing at any time between now and the effective date. Further, dual-flush toilets manufactured after the effective date that do not meet the water efficiency criteria in the revised specification are not permitted to bear the WaterSense label. Upon the effective date, EPA will designate models deemed ineligible under the revised specification (e.g., all dual-flush toilet models with a full-flush volume greater than 1.28 gpf) as “discontinued.” Under EPA’s current process, models marked as discontinued will remain on the WaterSense Product Search Tool for six months to allow time for previously manufactured and labeled models to be sold in the marketplace.

Within 60 days of the effective date, certifying bodies are required to remove ineligible products from their certification listings and submit updated product notification templates (PNTs). Certifying bodies must use Version 4.0 of the PNT, which reflects the revisions included in Version 2.0 of the specification.

EPA intends for a six-month period between the effective date and the discontinue date to serve as a grace period during which inventories of tank-type toilet models manufactured and labeled prior to the effective date may still be distributed and sold. During this time period, for products no longer earning the WaterSense label, manufacturers and private labelers should cease use of the WaterSense label or associated language communicating WaterSense certification on product packaging, specification sheets, product web pages, and other online or newly printed materials. In acknowledgement of the time it will take for manufacturers and private labelers to make comprehensive updates to these materials associated with products that are no longer labeled, EPA will pause brand monitoring related to dual-flush toilets during this time. Further, as has always been EPA’s policy, EPA will not require previously labeled products or previously printed materials associated with models that are ineligible under Version 2.0 of the specification to be destroyed or recalled from the market.

Upon the discontinue date (e.g., six months following the effective date of the specification), all dual-flush toilet models with a full-flush volume greater than 1.28 gpf will be removed from the WaterSense Product Search Tool. However, EPA will still be able to confirm the prior labeled status of models upon inquiries from consumers, utilities, or other interested parties. EPA expects that, by the discontinue date, manufacturers and private labelers have suspended use of the WaterSense label and associated language on any online or newly printed materials for all previously labeled products that are no longer eligible. EPA will resume brand monitoring following the discontinue date and will work with manufacturers, private labelers, and certifying

bodies to ensure product certification listings and product documentation are current and compliant.

EPA's intended timeline and associated activities are summarized below in Table 1.

Table 1. Proposed Timeline and Activities Associated with *WaterSense Specification for Tank-Type Toilets, Version 2.0*

<u>Date</u>	<u>Estimated Timeline</u>	<u>Activities</u>
<u>Publication date</u>	<u>Spring/Summer 2024</u>	<ul style="list-style-type: none"> EPA publishes final <i>WaterSense Specification for Tank-Type Toilets, Version 2.0</i>. Manufacturers, at their discretion, can begin to remove ineligible models from product certification listings.
<u>Effective date</u>	<u>Publication date + six months</u>	<ul style="list-style-type: none"> <i>WaterSense Specification for Tank-Type Toilets, Version 2.0</i> takes effect. Dual-flush models that are unable to meet the specification criteria can no longer bear the WaterSense label. EPA designates all dual-flush models no longer meeting specification criteria as "discontinued."
<u>Certifying body transition period</u>	<u>Effective date + 60 days</u>	<ul style="list-style-type: none"> Licensed certifying bodies are required to update certification listings and submit Version 4.0 of the PNT with up-to-date product listings.
<u>Grace period</u>	<u>Effective date until the discontinue date</u>	<ul style="list-style-type: none"> EPA pauses brand monitoring activities related to dual-flush toilets to offer manufacturers and private labelers the opportunity to update materials associated with previously labeled models. Manufacturers and private labelers work on updates to online and newly printed materials associated with previously labeled models to remove the WaterSense label and any language associated with WaterSense labeling.
<u>Discontinue date</u>	<u>Effective date + six months</u>	<ul style="list-style-type: none"> All dual-flush models no longer meeting specification criteria that were designated as "discontinued" are removed from the WaterSense Product Search Tool.
<u>Ongoing</u>	<u>Following discontinue date</u>	<ul style="list-style-type: none"> EPA reimplements brand monitoring activities related to dual-flush toilets works with manufacturers, private labelers, and licensed certifying bodies, as applicable, to resolve any identified brand monitoring issues.