

WaterSense Performance Overview: *Flushing Urinals*

Equal or superior product performance is a pillar of the WaterSense label. Ensuring performance is vital for maintaining program integrity and consumer confidence in WaterSense labeled products. As part of specification development, the U.S. Environmental Protection Agency (EPA) also evaluates whether high-efficiency products will have other environmental or economic impacts. This includes whether there will be unintended or negative impacts to overall system performance, which may affect user satisfaction and health and safety. This Performance Overview details EPA's process for developing performance test methods and criteria for flushing urinals. In general, as part of the [specification development process](#), EPA involves many WaterSense stakeholders, including manufacturers, certifying bodies and testing laboratories, standard development organizations, trade organizations, water and energy utilities, and other water efficiency experts and advocates. Each of these stakeholders offers a unique perspective and has dedicated technical expertise and other resources that have contributed to the development of performance criteria used to ensure WaterSense labeled products perform as well or better than standard products on the market.



EPA released the [WaterSense Specification for Flushing Urinals](#) and associated supporting statement on October 8, 2009.¹

Summary of Performance Requirements

Table 1 summarizes the performance requirements included in the *WaterSense Specification for Flushing Urinals*, either directly or by reference to an applicable national standard. Table 1 also describes the purpose of each performance requirement, the applicable standard the WaterSense specification references, and any specific requirements or deviations from the referenced standard.

¹ More information on EPA's rationale for establishing its efficiency and performance criteria for flushing urinals can be found in the supporting statement, response to comments, and other background documents found at www.epa.gov/watersense/product-background-materials.

Table 1. Summary of Performance Criteria Included in the *WaterSense Specification for Flushing Urinals*

Performance Requirement	Purpose	Referenced Standard (if applicable)	Applies to Conventional Models	Applies to WaterSense Labeled Models
Surface wash	Evaluates a urinal's ability to clean the surface of the fixture.	ASME A112.19.2/ CSA B45.1 <i>Ceramic Plumbing Fixtures</i>	✓	✓
Dye test	Assesses a urinal's ability to clear liquid waste from the fixture.	ASME A112.19.2/ CSA B45.1 <i>Ceramic Plumbing Fixtures</i>	✓	✓
Flushometer valve life cycle test	Tests whether flushometer valves continue to function as intended after 250,000 cycles.	ASSE 1037 <i>Performance Requirements for Pressurized Flushing Devices for Plumbing Fixtures*</i>	✓	✓
Non-hold-open design	Ensures pressurized flush valves do not exceed the rated flush volume when the primary actuator is maintained in the flush position.	No referenced standard.		✓
Adjustability limit	Ensures pressurized flush valves do not contain a flush volume adjustment that allows the flush volume to vary more than 0.1 gallons per flush.	No referenced standard.		✓

* ASSE 1037, referenced in the specification, has since been superseded by ASSE 1037/ASME A112.1037/CSA B125.37 *Performance Requirements for Pressurized Flushing Devices for Plumbing Fixtures*. The performance requirement is maintained in the updated, harmonized standard.

Development of Performance Requirements

During the specification development process, EPA found the requirements in the national standards to be sufficient for ensuring product performance and decided not to impose any additional performance requirements. These standards require flushing urinals to pass a surface wash test and a dye test that ensure the urinal adequately rinses the urinal fixture. By aligning with national performance standards, WaterSense is ensuring that high-efficiency flushing urinals that flush at 0.5 gallons per flush (gpf) or less perform as well as standard counterparts flushing at 1.0 gpf.