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DEVELOPMENT OF MAXIMUM PERFORMANCE (MaP) TESTING PROTOCOL **FOR COMMERCIAL TOILETS**

The current MaP testing protocol for residential toilets was established in 2003 and has proven to be enormously successful in educating consumers, specifiers, design professionals, plumbers, water utilities and others as to toilet fixture flush performance. Furthermore, 60 manufacturers endorse and now participate in the MaP testing program, which has tested and reported on more than 1,200 different fixtures since 2003.

It is our opinion that commercial toilets (e.g., flushometer or flush valve toilets) are potentially subjected to a more aggressive environment than residential toilets in the field. Demands for satisfactory flush performance are greater, abuse occurs, and custodial care is generally inferior to residential applications. Therefore, commercial toilets should have to prove a higher level of flush performance than residential toilets for certification, i.e., the certification requirements should be different for residential and commercial toilet fixtures, with the commercial requirements being more rigorous.

Many other products differentiate between residential/standard grade models and ‘commercial’ or ‘industrial’ grade models, such as electric drills, work boots, carpet, file cabinets, flooring tiles, etc.

What’s more, recent product testing by Veritec Inc. has clearly demonstrated that, contrary to the common perception, all flushometer-operated toilet fixtures do not necessarily out-perform all gravity-operated toilet fixtures. In fact, a number of gravity-operated fixtures demonstrate flush performance superior to today’s flushometer valve/bowl fixture combinations. This is due, in part, to the very aggressive and commendable development of superior gravity-fed and pressure-assist toilet fixtures by the plumbing industry in the last 10+ years. We believe that once a commercial toilet MaP testing protocol has been established, any toilet model that meets these more rigorous requirements should be allowed to label itself as an ‘industrial’ or ‘commercial’ grade toilet model, regardless of whether it is operated with a flushometer valve, a pressure-assist flushometer tank, or gravity.

Given the need to address the commercial sector, we are proposing that the protocol elements detailed below be used to measure performance and evaluate toilet models intended for such applications.

This document is being distributed to toilet fixture manufacturers, governmental agencies, water providers, and testing facilities (e.g., IAPMO, CSA, Intertek) in order to collect important feedback and advice. Based on what we receive, we will finalize a commercial toilet MaP testing protocol to be applied to fixtures sold in the U.S. and Canada. It is our intention and hope that this testing protocol, once finalized, will be accepted by the various parties and incorporated into the appropriate fixture certification requirements, voluntary labeling programs, and water efficiency incentive programs.

Proposed test elements

- (1) 350g of sinking raw MaP testing soybean paste (7 test specimens at 50g each)
- (2) 8 loosely crumpled balls of toilet paper, 6 sheets per ball
- (3) 2 unwaxed (or waxed) paper toilet seat covers freely dropped onto the water surface
- (4) 2 paper towels (hand towels) freely dropped onto the water surface
- (5) 350g of floating raw MaP testing soybean paste (7 test specimens at 50g each)
- (6) A single 200g soybean paste 'super log'
- (7) Wetted balls of toilet paper (6 sheets) dropped placed at bowl/water surface interface every 45 degrees beginning at the 6 o'clock position (to test bowl wash)
- (8) Excessive toilet paper – 10 equal balls, each ball containing 1 m of toilet paper

Certain tests would be combined, e.g., one test might combine 1, 2, and 3 above, while another test might combine 2 & 6 above. Minimum performance thresholds have yet to be established. All of this will be determined as the protocol is developed and evolves.

For further information and to submit your input...

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