Designation: ~~D3890 – 05 (Reapproved 2010)~~ D3890 – 18

Standard ~~Test Method~~ Practice for Number of Strokes to Prime a Mechanical Pump Dispenser[1]

This standard is issued under the fixed designation D3890; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This ~~test method~~ practice covers the determination of the number of actuations required to prime a pump dispenser (spray and flow types) with a consumer-type product.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate ~~safety~~ safety, health, and ~~health~~environmental practices and determine the applicability of regulatory limitations prior to use.*

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Significance and Use

2.1 This ~~test method~~ practice can be used to visually compare priming characteristics of different pump dispensers and different products.

2.2 This ~~test method~~ practice is suitable for establishing specifications for both the pump dispenser and the final package.

3. Apparatus

3.1 No apparatus is required, although a mechanical device for actuating the pump dispenser may be used.

4. Sampling

4.1 Select an appropriate number of dry, unused pump dispensers at random for the precision and accuracy desired. A number of ten test specimens are recommended, but a minimum of three is acceptable.

5. Conditioning

5.1 If possible, condition the test specimens at 23 ± 3°C (73 ± 5.4°F) for not less than 4 h. If the test specimens are not conditioned at the recommended temperature, this should be noted in the test report discussed in 8.1.

5.2 Test pumps should be tested no sooner than 24 h after assembly when possible. If the pumps are not conditioned at the recommended time, this should be noted in the test report discussed in 8.1.

6. Test Specimens

6.1 For each test specimen, select a container to which the pump dispenser will be attached during the test. Since the dip tube length affects the number of strokes to prime, the actual bottle of the final package is recommended for testing.

7. Procedure

7.1 Fill each container with the product to be tested at the actual level of the final package target weight.

7.2 Attach the pump dispenser securely to the container. The pump should be in the off, locked, or closed position. Take care not to actuate the pump dispenser during this step.

NOTE 1—If the actuator is placed onto the pump after the pump has been secured onto the container, then report this additional stroke in the final results in 8.1.

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[1] This ~~test method~~ practice is under the jurisdiction of ASTM Committee F02 on ~~Flexible~~Primary Barrier Packaging and is the direct responsibility of Subcommittee F02.30 on Mechanical ~~Pump~~ Dispensers.

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