Designation: F1104 – 02 (Reapproved 2019)

Standard Test Method for Preparing Aircraft Cleaning Compounds, Liquid Type, Water Base, for Storage Stability Testing[1]

This standard is issued under the fixed designation F1104; 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 covers the determination of the stability in storage, of liquid, water-base chemical cleaning compounds, used to clean the exterior surfaces of aircraft.

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, health, and 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. Referenced Documents

2.1 *U.S. Government Documents:*[2]

Federal Specification PPP-P-704 Pails, Metal (Shipping, Steel, 1 through 12 Gallons)

3. Summary of Test Method

3.1 Storage stability is determined by evaluation of the effect of time, temperature, and environmental conditions on the cleaning compound. Samples used for testing are filled containers taken from the manufacturer's controlled production formulation, packaged, and delivered to the purchaser for normal use. The sample container shall be subjected to the specified storage environment for a period of 12 months. The test shall be completed prior to 24 months from date of packaging.

4. Significance and Use

4.1 This test method determines the procedure to be used to ensure the long term storage stability of aircraft cleaning and maintenance products, in order to ensure their ability to meet the shelf-life requirements called up in specifications or contract documents. The subsequent testing requirements are detailed in the specification or contract.

5. Sampling

5.1 The sample for storage stability testing shall be taken from a controlled production formula, packaged lot, or batch delivered in a sealed, filled container to the purchaser for use. This sample is normally a 1 gal can conforming to Federal Specification PPP-P-704. This material shall have previously been tested and passed all other specification requirements for qualification or acceptance. The sample container selected for the test shall be kept sealed and unopened for the duration of the test. The sample container shall be durably and legibly marked with the following minimum information:

Storage Stability Test Sample

Supplier
Formula number
Date of packaging
Cold test period
Hot test period
Batch/lot No.
Test began
Test ends

6. Procedure

6.1 *Storage Environment*—Place the sample container in a storage area where a temperature of 50 to 91 °F (10 to 33 °C) is maintained at least 80 % of the total storage test time. Do not subject the storage test sample to temperature over 150 °F (66 °C) or under 10 °F (−12 °C) during the entire test. Maintain the sample container in a static condition not subject to vibration, rolling, inversion, or other movement. Movement to the necessary temperature-controlled area for cold- and hot-temperature testing is excepted, but accomplish such transfer with minimum (or no) disturbance of container contents.

6.1.1 *Cold-Temperature Storage Environment*—Subject the sample container to a 15-day time interval 17 ± 3 °F (−8 ± 2 °C). Conduct this cold test interval during the period 90 to 120 days after start of the storage stability test time.

6.1.2 *Hot-Temperature Storage Environment*—Subject the sample container to a 15-day time interval at 120 ± 18 °F (49

[1] This test method is under the jurisdiction of ASTM Committee F07 on Aerospace and Aircraft and is the direct responsibility of Subcommittee F07.07 on Qualification Testing of Aircraft Cleaning Materials.

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[2] Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5098, Attn: NPODS.