



ANSI/ASTM F 503 - 77

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## Standard Recommended Practice for PREPARING AIRCRAFT CLEANING COMPOUNDS, LIQUID-TYPE, FOR STORAGE STABILITY TESTING<sup>1</sup>

This Standard is issued under the fixed designation F 503; 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 reappraisal.

### 1. Scope

1.1 This recommended practice covers the determination of the stability, in storage, of liquid, water-base chemical cleaning compounds, used to clean exterior surfaces of aircraft.

### 2. Summary of Practice

2.1 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.

### 3. Sampling

3.1 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 one 5-gal can or one 55-gal drum. 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 \_\_\_\_\_

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. Procedure

4.1 *Storage Environment*—Place the sample container in a storage area where a temperature of 50°F (10°C) to 91.4°F (33°C) is maintained at least 80 % of the total storage test time. Do not subject the storage test sample to temperatures 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.

4.1.1 *Cold-Temperature Storage Environment*—Subject the sample container to a 15-day time interval at 17.6°F (−8°C) ± 3.6°F (2°C). Conduct this cold test interval during the period 90 to 120 days after start of the storage stability test time.

4.1.2 *Hot-Temperature Storage Environment*—Subject the sample container to a 15-day time interval at 120.2°F (49°C) ± 18°F (10°C). Conduct this hot test interval after 270 days of elapsed test time but 60 days prior to the termination of the storage test.

<sup>1</sup> This recommended practice is under the jurisdiction of ASTM Committee F-7 on Aerospace Industry Methods. Current edition approved March 25, 1977. Published May 1977.