Ford Motor Company

FORD LABORATORY TEST METHOD AK 105-01

DETERMINATION OF VOLATILE AND NON-VOLATILE MATTER IN CLEANERS

Application

This test method is used to determine the percent of volatile and non-volatile matter in cleaners.

Apparatus

Analytical Balance
Precision +/- 0.1 mg

Oven
Mechanical, forced-air, convection, capable of maintaining 104 +/- 2 °C.

Petri Dish with Cover
100 mm dia x 15 mm height

Steam Bath

The above apparatus is available from any reputable laboratory equipment supply house.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

1. Weigh out a 10 +/- 0.5 g sample in a tared Petri dish with cover.

   Note: The Petri dish is weighed with cover since the sample must be immediately covered prior to reweighing before and after oven drying.

2. Place on steam bath with cover removed for initial drying to remove solvents that are present.

Date	Action	Revisions	
2001 01 22	Revised	Editorial – no technical change	A. Cockman
2000 03 23	Revised	Editorial – no technical change	A. Cockman
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3. Place in forced-air oven with cover underneath the bottom of the dish for 24 +/- 0.5 h.

4. Remove from oven and relocate cover on dish.

5. Place in desiccator and cool to 23 +/- 2 °C.

6. Reweigh.

7. % Volatile matter = $\frac{\text{Initial weight (Step 1) - Final weight (Step 6)}}{\text{Weight of Sample}} \times 100$

For Questionable Values:

(a) The total % of individual components determined gravimetrically exceeds the % non-volatiles obtained (e.g., per FLTM AJ 106-01).

(b) The % non-volatiles does not meet specification/standard requirements.

Repeat the non-volatile test utilizing the gravity, convection oven.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.

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