

# SOA-E-602 Residual Moisture of Extractors

## 1. Scope

- 1.1. This test method provides an evaluation of residual moisture carpet as a direct result of the extraction process.
- 1.2. This test method applies to all extractors tested in the SOA program.
- 1.3. This test method applies to both commercial and residential extractors.

## 2. Safety

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

## 3. References

- 3.1. NONE

## 4. Apparatus and Materials

- 4.1. Conveyor with a minimum bed length of 10 feet and stroke of 5 feet and minimum bed width of 35 inches. Conveyor must be capable of maintaining specified test speed both forward and reverse. Conveyor must be equipped with brackets to hold the test equipment stationary, exert no horizontal or vertical force.
- 4.2. Carpet mounting platform comprised of the same material as test carpet with a 12 inch by 12 inch cut-out to be mounted on the conveyor.
- 4.3. Tachometer used to measure conveyor speed in feet/second
- 4.4. Weighing scale accurate to 0.01 gram and having a capacity of at least 2000 grams
- 4.5. Distilled water for use with Extractor
- 4.6. Voltage Meter Regulator

## 5. Test Specimen

- 5.1. Test Carpet Description: Residential Cut Pile or Commercial Cut Pile (usage types as specified on the COC) (See SOA Test Carpet Specifications)
- 5.2. Determine size of test carpet based on the width of the Extractor nozzle
  - 5.2.1. 10 inches by 36 inches – for nozzles between 9 and 9.99 inches in width
  - 5.2.2. 11 inches by 36 inches – for nozzles between 10 and 10.99 inches in width
  - 5.2.3. 12 inches by 36 inches - for nozzles between 11 and 11.99 inches in width
  - 5.2.4. 13 inches by 36 inches - for nozzles between 12 and 12.99 inches in width
  - 5.2.5. 14 inches by 36 inches - for nozzles between 13 and 13.99 inches in width
  - 5.2.6. 15 inches by 36 inches - for nozzles between 14 and 14.99 inches in width
  - 5.2.7. For Extractors with a nozzle width larger than 14.99 inches in width the test carpet size will be the width of the nozzle plus 0.5 inches by 36 inches.
- 5.3. Cut 3 test carpets of the size previously determined. Mark pile direction on carpet.

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- 5.4. Mark the specimens with the test identification number.
- 5.5. Condition prepared samples in test room a minimum of 16 hours prior to testing and no more than 72 hours.

### 6. Test Format

- 6.1. Condition Test Extractor (unless previously conditioned in prior testing)
  - 6.1.1. Energize test Extractor in a stationary position at the rated voltage +/- 1% for 30 minutes
- 6.2. Weigh the test carpet prior to testing
- 6.3. Mount test carpet sample on conveyor. Place test carpet with pile lay towards the extractor.
- 6.4. Fill extractor with distilled water.
- 6.5. Install extractor on the conveyor.
  - 6.5.1. Position extractor on the carpet 4-6 inches in front of the carpet test specimen.
  - 6.5.2. Ensure the extractor/wand head contact with the carpet.
  - 6.5.3. If extractor has multiple settings for use, refer to the COC for specific settings to be used in testing.
- 6.6. Extraction Cycle on Test Carpet
  - 6.6.1. A cleaning cycle is defined by a number of wet passes and a number of dry passes. The total number of passes in a cleaning cycle is 4 passes. Follow specifications for number of wet passes and number of dry passes within a cleaning cycle as stated on the COC.
  - 6.6.2. Set speed on conveyor at 1.0 foot per second.
  - 6.6.3. Activate continuous back and forth conveyor movement until one cleaning cycle is achieved. Make sure that each pass begins and ends on the mount and not on the test carpet.
  - 6.6.4. Return extractor to starting position, de-energize and remove test sample after one cleaning cycle.
  - 6.6.5. Immediately weigh the test carpet for residual moisture.
  - 6.6.6. Repeat 6.2 thru 6.5.5 for additional 2 samples.

### 7. Evaluation

- 7.1. Subtract weight in grams of test carpet prior to one cleaning cycle from the weight in grams of the test carpet after one cleaning cycle to calculate Residual Moisture.
- 7.2. Convert Residual Moisture of the test specimen in grams to the Residual Moisture in ounces per square yard.

### 8. Report

- 8.1. The identifying information for the extractor (Manufacturer, product name and model, COC number, serial number and description of any attachments and spray tips used)

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- 8.2. Record test sample size used for testing
- 8.3. Record the width of the Extractor nozzle
- 8.4. Record date carpet was cleaned.
- 8.5. Record extractor test speed and voltage
- 8.6. Record settings used for testing
- 8.7. Record the number of wet passes and dry passes in a cleaning cycle.
- 8.8. Record the initial weight of each test specimen
- 8.9. Record the final weight of each test specimen immediately after cleaning
- 8.10. Record the Residual Moisture for each test specimen
- 8.11. Record average Residual Moisture in ounce per square yard
- 8.12. Report any deviations from this test method.