

**Test Method of Specified Requirements of
Deodorization for Charcoal Contained Filler
Textiles**

FTTS-FA-017 (Version 1.0)

FTTS-FA-017 Deodorization for Charcoal Contained Filler Textiles

1. Scope:

This criterion is applicable to the evaluation and testing of charcoal contained filler textiles that claim ammonia-reducing effects.

2. Terminology:

Charcoal-contained filler fiber textiles refer to the products that use charcoal-contained synthetic fibers as fillers, including various bedding products such as quilts, pillows and quilted bedspreads as well as various clothing products such as quilted jackets and quilted pants.

Deodorization refers to the capability of a fiber to reduce the amount of ammonia when it is exposed to a fixed amount of ammonia.

3. Performance:

Analysis of Charcoal Content : Carbon element shall be found after treating the fiber specimen based on the method stipulated in Section 3.1 of FTTS-FA-016.

Deodorant Performance : Test the percentage of odor reduction of the specimen after 2 or 24 hours.

Performance specification

Grade	Test Time (hour)	Percentage of Ammonia Reduction (%)
A+	2	≥ 70
A	24	≥ 70
B	24	≥ 40

4. Sample Preparation

Take the specimens at $20\pm 2^{\circ}\text{C}$ and relative humidity $(65\pm 2)\% \text{RH}$ for 24 hours

5. Test Method

5.1 Analysis of Charcoal Content : Carbon element shall be found after treating the fiber specimen based on the method stipulated in Section 4.1 of FTTS-FA-016.

5.2 Deodorant Performance

5.2.1 Take three pieces of specimens and control the weight about (1.0 ± 0.1) grams.

5.2.2 The specimens are dried in an oven for 2 hours at $105\pm 2^{\circ}\text{C}$, removed from the oven, and placed at $20\pm 2^{\circ}\text{C}$ and relative humidity $(65\pm 2)\% \text{RH}$ for 24 hours.

5.2.3 Cut out a corner from a 5Litter tedlar then put in the specimen then seal with the heat sealer ; Meanwhile prepare another empty 5Litter tedlar without

specimen inside for the comparative sample.

- 5.2.4** Vacuum air from the nearest exit of both specimens' bags.
- 5.2.5** Adjust the density of Ammonia gas : Dilute Ammonia by Nitrogen gas to 100ppm.
- 5.2.6** Measure the density by detecting tube twice and the alternative difference should be within 5%.
- 5.2.7** Apply the flow device to fill in both bags with 3 liters (with specimen and reference) those vapor which had been adjusted density and count the time in the same time.
- 5.2.8** Apply the detecting tube to measure the residual density of both specimen and the comparative sample after testing time , record the integer figure of the average of three specimens and the comparative sample.
- 5.2.9** Average the values obtained from three specimens and the comparative sample. The ratio of deodorization is calculated by the formula is as follow : The ratio of deodorization = (the density of comparative sample – the residual density)/the density of comparative sample×100.

The method for detecting tube

Type of gas	Ammonia
The density of beginning(ppm)	100
The type of detecting tube	3 La(2.5-200ppm)
weight	(1.0±0.1)
Pretest treatment	Dried at temperature of 105±2°C for 2 hours and placed at 20±2°C and relative humidity (65±2)%RH for 24 hours
The quintiles of specimen	3
Volume of bags(L)	5
Volume of filling in gas(L)	3
Gas for dilution	Nitrogen
Testing period(hours)	2 or 24