WI 201202.06

T 1011

BALLOT NO. 04 - SARG

DRAFT NO. 03

DATE 6/1/2023

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SUBJECT CATEGORY Fiberglass Mat

RELATED METHODS See "Additional Information"

CAUTION:
This Test Method may include safety precautions which are believed to be appropriate at the time of publication of the method. The intent of these is to alert the user of the method to safety issues related to such use. The user is responsible for determining that the safety precautions are complete and are appropriate to their use of the method, and for ensuring that suitable safety practices have not changed since publication of the method. This method may require the use, disposal, or both, of chemicals which may present serious health hazards to humans. Procedures for the handling of such substances are set forth on Safety Data Sheets which must be developed by all manufacturers and importers of potentially hazardous chemicals and maintained by all distributors of potentially hazardous chemicals. Prior to the use of this method, the user must determine whether any of the chemicals to be used or disposed of are potentially hazardous and, if so, must follow strictly the procedures specified by both the manufacturer, as well as local, state, and federal authorities for safe use and disposal of these chemicals.

Basis weight of fiber glass mats

(Five-year review of Official Method TM1011 om-15)

(Underscores, notes, and strikethroughs show changes from Draft 2)

1. Scope

This method covers the determination of the basis weight of fiber glass mat. The basis weight includes the fiber, binder and other materials incorporated into the finished web. Weight is reported as pounds per 100 square feet (i.e., not customary TAPPI paper units).

2. Applicable documents

2.1 TAPPI T 410 "Grammage of Paper and Paperboard (Weight per Unit Area)."

2.2 TAPPI T 1007 "Sample Location."

3. Summary

3.1 The basis weight of fiber glass mat is determined by weighing nine 1-ft^2 (0.093-m^2) samples of the mat.

4. Apparatus

4.1 *Balance*. The balance shall be capable of weighing accurately to the nearest 0.01 g. The balance may be a specifically constructed sheet-weighing device that indicates the basis weight in pounds per 100 square feet when a 12 in. ×12 in. (305 mm ×305 mm) sample is weighed.

4.2 *Sample cutter*. Specimens may be cut with a sharp knife using a 12 in. × 12 in. (305 mm × 305 mm) template, a die cutter with alignment guide, or a paper cutter having an attachment for ensuring parallelism of opposite edges can also be used.

4.3 *Oven*. A forced draft convection oven capable of maintaining 220° ± 5°F (105° ± 3°C).

5. Test specimens

5.1 The sample shall consist of one 12-inch by 12-inch (0.305-m by 0.305-m) sample per each lane (per T 1007) of trimmed machine width.

Deleted: foot (per each 1/3 meters)

5.2 The dimensional tolerance of each cut specimen is ± 0.05 in. (1 mm).

6. Procedure

6.1 Place each of the test specimens in the convection oven which has been stabilized at 220° ± 5°F (105° ± 3°C) for 5 ± ½ min.

6.2 Remove specimens from the oven with forceps and place in a desiccator (see Note 1) until cooled to room temperature.

NOTE 1: Experience has shown that the low mass of typical industrial mats facilitates rapid cooling in a normal laboratory environment. Therefore, a dessicator may not be necessary provided that convection current effects are avoided in weighing and that the weighing is done in a sufficiently short time to avoid significant reabsorption of water from the ambient atmosphere.

6.3 Weigh and record the weight of each specimen to the nearest 0.01 g. (Provide for grounding to eliminate static electricity if necessary to assure accuracy in weighing.)

6.4 Convert unit weight of each specimen to pounds per 100 square feet by:

$B \times 0.2205$ = unit weight in pounds per 100 square feet.

B = weight in grams of a 12 in. × 12 in. (305 mm × 305 mm)

7. Calculations and report

7.1 Calculate the average weight for each lane.

7.2 Calculate the average weight for all nine specimens.

7.3 Report average basis weight of each lane to the nearest 0.01 pounds per 100 square feet.

7.4 Report average basis weight of all nine samples to the nearest 0.01 pounds per 100 square feet.

8. Precision

8.1 On the basis of studies made in accordance with TAPPI T 1200 "Interlaboratory Evaluation of Test Methods to Determine TAPPI Repeatability and Reproducibility" test results, each representing an average of 5 determinations from the same sample (commercial 2.0 lb / 100 square feet fiberglass mat), are expected to agree within the amounts stated below. The study included five laboratories.

8.2	Average basis weight	2.00 lb / 100 ft^2
	Repeatability	6% - 0.12 lb / 100 ft^2
	Reproducibility	9% - 0.18 lb / 100 ft^2

9. Keywords

Fiber glass mats, Basis weight

10. Additional information

10.1 Effective date of issue: To be assigned

10.2 Only minor editorial changes were made to this 2011 revision. In the 2015 edition, section 5.1 was revised to change the sampling requirements because it was determined that nine total samples may not always be appropriate to trimmed machine width.

Your comments and suggestions on this procedure are earnestly requested and should be sent to the TAPPI Standards Department. ■