



## **WSDOT Test Method T 915**

### ***Practice for Conditioning of Geotextiles for Testing***

#### **1. Scope**

- a. This practice covers a procedure for conditioning geotextile specimens for testing and establishes atmospheric conditions which are acceptable for testing when the standard atmosphere for testing cannot be obtained due to local laboratory conditions.

#### **2. Applicable Documents**

- a. ASTM Standards.
  - D 123 Terminology Relating to Textiles
  - D 1776 Practice for Conditioning Textiles for Testing
  - D 4439 Terminology for Geotextiles
  - D 4533 Standard Test Method for Trapezoid Tearing Strength of Geotextiles
  - D 4595 Standard Test Method for tensile Properties of Geotextiles by the Wide-Width Strip Method
  - D 4632 Standard Test Method for Breaking Load and Elongation of Geotextiles (Grab Method)

#### **3. Definitions**

- a. Atmosphere for Testing Geotextiles – Air maintained at a relative humidity of  $55 \pm 25$  percent relative humidity and temperature of  $70^\circ \pm 4^\circ\text{F}$  ( $21^\circ \pm 2^\circ\text{C}$ ).
- b. Geotextile – Any permeable textile used with foundation, soil, rock, earth, or any other geotechnical material, as an integral part of a manmade product, structure, or system.
- c. Specimen – A specific portion of a material or laboratory sample upon which a test is performed or which is taken for that purpose.
- d. Preconditioning – Atmospheric conditioning of a test specimen prior to testing in a specified environment in which the specimen is allowed to come to equilibrium with that specified preconditioning environment.

#### **4. Summary of Practice**

- a. Specimens are preconditioned by soaking them in distilled water for a specified period of time and are tested at ambient laboratory room temperature and humidity conditions without allowing the specimens time to come to equilibrium with the ambient testing atmosphere.

## 5. Uses and Significance

- a. The conditioning prescribed in this practice is designed to obtain reproducible test results on geotextiles.

## 6. Apparatus

- a. Water filled pan for soaking specimens.
- b. Equipment for recording the temperature of the air and the water, and the humidity of the air.

## 7. Procedure

- a. Precondition specimens by immersing them in distilled water maintained at a temperature of  $70^{\circ} \pm 4^{\circ}\text{F}$  ( $21 \pm 2^{\circ}\text{C}$ ). The time of immersion must be sufficient to wet-out the specimens thoroughly, but must be a minimum of two hours. To obtain thorough wetting, add not more than 0.05 percent of a nonionic neutral wetting agent to the water.
- b. After the specimens have been thoroughly wetted, remove each specimen from the water, and allow excess water contained in the pores of the specimen to drain from the specimen for a period of time less than or equal to one minute. After the specimen has drained during the maximum allowed time period of one minute, the specimen test must begin before nine minutes of time have elapsed from the end of the draining period.

**Note 1:** If more than a total of nine minutes from the time the specimen is removed from the water is allowed to elapse before the specimen test is actually begun, the specimen should not be considered to be thoroughly wetted. If this occurs, the specimen should be reimmersed for a minimum of two hours before a test is attempted again for that specimen. Thorough wetting is needed to ensure that the specimen is not affected by the ambient humidity conditions during testing if those ambient conditions are not at the standard atmosphere for testing.

- c. The atmosphere for testing, geotextiles must be maintained at a temperature of  $70^{\circ} \pm 4^{\circ}\text{F}$  ( $21 \pm 2^{\circ}\text{C}$ ), and a relative humidity of  $55 \pm 25$  percent.
- d. If dry testing of the geotextile is required in addition to wet testing, the specimens must be conditioned in the atmosphere for testing as stated in Section 7.3. Specimen conditioning shall be accomplished in this case by allowing the specimens to reach moisture equilibrium in the atmosphere for testing. Equilibrium is considered to have been reached when the change in the mass of the specimen in successive weighings made at intervals of not less than two hours does not exceed 0.1 percent of the mass of the specimen. Specimen immersion requirements do not apply to specimens which are to be tested dry. Specimens tested dry must be tested in the atmosphere for testing as previously defined.