FORMAT FOR SYNOPSIS OF INDIAN STANDARDS

59

Number and Title of the Indian Standard:

IS 17306:2019 /ISO 10119:2002 **Textile glass – Carbon fibre – Determination of density**

Doc TXD 40 (14029)

Scope:

This International Standard specifies three methods for the determination of the density of carbon fibre yarn:

Method A: liquid-displacement method;
Method B: sink/float method;
Method C: density-gradient column method.

Method C is the reference method.

Salient features of content:

Method A: Liquid-displacement method

Principle

A specimen is weighed in air and then in a liquid which completely wets out the specimen and which has a known density at least 0,2 g/cm3 less than that of the specimen. The difference in weight of the specimen in the two media is due to the Archimedean upthrust.

Method B: Sink/float method

Principle

This method is based on the observation of the state of equilibrium of the carbon fibre in a liquid mixture that has the same density as the fibre.

Two versions of this method are specified:

method B1: a dynamic method in which the mixture of liquids required to hold the test specimen in uniform suspension is made progressively;

method B2: test portions of finely chopped yarn are placed in a series of liquid mixtures of different known densities.

Method C: Density-gradient column

Principle

This method is based on the observation of the equilibrium position of a test specimen in a column of liquid having a linear density gradient.

Density-gradient columns are columns of liquid whose density increases uniformly from the top to the bottom of the column.

Types/Grades/Classes, if any covered in the standard:

Not applicable.