



The following commercial specification is an original Parachute Industry Association specification.

PERCENT SOLIDS ADD-ON FOR CORD, NYLON, CLASS F, DETERMINATION OF

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1. SCOPE

1.1 Scope. This method is intended to determine the percent solid fluorocarbon add-on to Cord, Nylon and Cord, Nylon, Coreless when treated with fluorocarbon.

2. TEST SPECIMEN

2.1 Test Specimen. Two (2) specimens shall be a single length of approximately 4 yards (144 inches) each.

3. NUMBER OF DETERMINATIONS

3.1 Number of Determinations. Unless otherwise specified in the procurement document two determinations shall be made from each sample unit.

4. APPARATUS

4.1 Tape or ruler. Tape or ruler graduated in increments of 1/16" capable of measuring nine (9) feet (108").

4.2 Weight. 3 oz. weight with the capability of being suspended from end of cord sample.

4.3 Oven. Hot air circulating oven capable of maintaining required temperature within $\pm 4^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$).

4.4 Scale. Scale with accuracy to one-thousandth (.001) of a gram.

4.5 Marking medium. Water-insoluble ink marker.

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5. PROCEDURE

5.1 Samples of each lot of cord shall be selected during the fluorocarbon process.

5.2 From the same continuous end, cut two (2) four (4) yard (approximate) samples from the untreated cord. Identify the samples as untreated. From where the samples were cut, knot the two (2) ends back together and send through the coating process.

5.3 After the same continuous end comes out of the process, coated and cured, cut two (2), four (4) yard samples (approximately) of the treated cord adjacent to and after the knot that tied the two ends untreated cord together. Identify the samples as treated.

5.4 Individually suspend the untreated cord sample vertically and attach 3 oz. weight to bottom end of cord. Using tape measure and ink marker, measure and place two bench marks between the ends 3 yards (108 inches) apart. Cut each sample at each bench mark to obtain the 3 yard (108 inch) sample.

5.5 Place untreated samples in oven at $300 \pm 4^{\circ}\text{F}$ ($149 \pm 2^{\circ}\text{C}$) for 15 minutes.

5.6 Remove the untreated samples from oven; allow to cool to room temperature for approximately one (1) minute.

5.7 Weigh each untreated sample separately to the nearest thousandth (.001) of a gram and record. This will be used as the “before treatment” weight in the calculation.

5.8 Repeat steps 4 through 7 for the treated cord and record weight for the “after treatment” weight in the calculation.

5.9 Calculations. The calculation for the percent add-on shall be made as follows:

$$\% \text{ ADD-ON} = \frac{\text{AFTER TREATMENT} - \text{BEFORE TREATMENT}}{\text{BEFORE TREATMENT}} \times 100$$

6. REPORT

6.1 The solid add-on results shall be the average of two (2) determinations and reported to the nearest one-hundred (.01) of a percent.

6.2 Each individual value used to calculate the average shall also be reported.
