



# What is the VW-1 test...

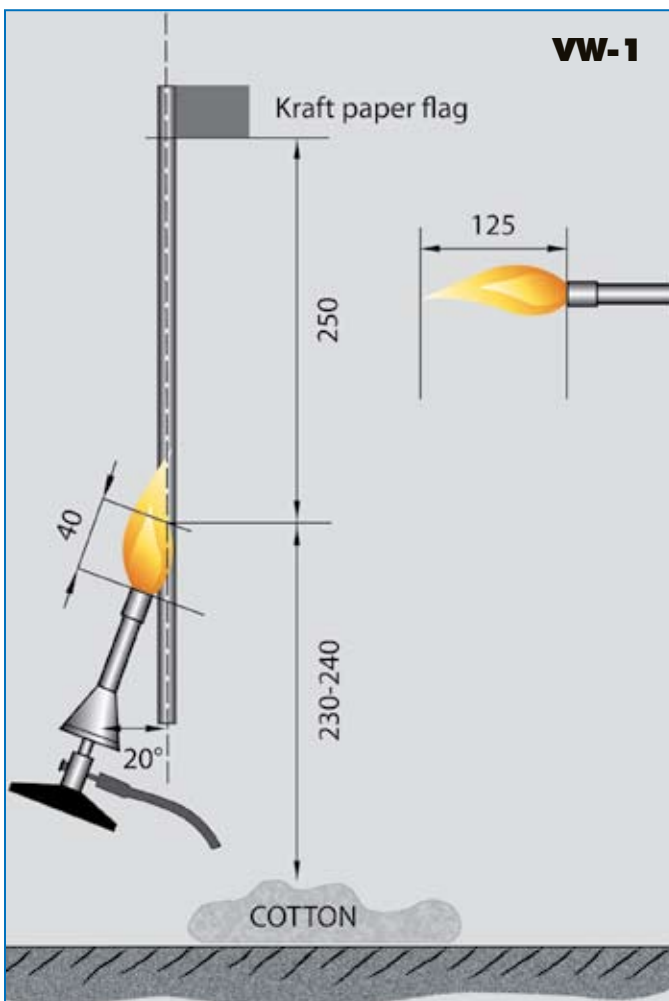


**TECHFLEX**  
Braided Sleeving Products

Fire safety is an important part of our every day lives. As the leading manufacturer of sleeving materials for the wire and cable industry Techflex has extensive experience and facilities in place for the testing and verification of the plastics and other materials we use. Meeting today's standards correctly is far more involved than simply choosing the right raw material. The verification of our final product to pass the VW-1 flame test is a complex regularly scheduled procedure. We use our in house testing apparatus to verify that new batches of material meet the expected parameters and that materials continue to pass at random intervals. Techflex additionally sends material to the Underwriters Laboratory for independent testing and certification to the UL and CSA standards.

Many tests have been developed to measure the flame retardancy of wire and sleeving products. Fire Safety Professionals look for the VW-1 mark along with the UL certification more than any other mark in the United States. This is due to the tests unique ability to show that the materials that pass the test have a highly reduced likely hood of contributing to a fire by supporting a flame for an extended duration. The flame retardancy of a sleeving is often defined as the ability of a sleeving to cease burning once the source of heat is removed.

Below is an overview of the most widely used North American fire test, which is called VW-1 (UL 1581). The test is also called the Vertical Wire (VW) test because it tests the materials ability to resist fire along a vertically suspended wire.



### Flame Temperature

Given by the 125 mm / 500 W test flame  
The flame has to be calibrated as specified in ASTM D 5207-91

### Burner Type

Laboratory burner (Tirrill burner) with a heat output of approximately 3,000 BTU/hour (as specified in ASTM D 5025-94)

### Sample Position and Length

Vertical / 450 mm

### Flame Duration

5 cycles, each cycle 15 sec. with a break of min. 15 sec., and max. 60 sec., depend on the flaming of the specimen

### Conditions

Not more than 25% of the paper must be carbonized. The sample must not continue to burn longer than 1 min. Dropping material must not ignite the cotton lying beneath