



Force-Strain Characteristics and
Rupture-Load Capability of Viking-
Type Suspension-Line Material Under
Dynamic Loading Conditions

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By -

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 22 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. A series of tests has been conducted to investigate the elastic behavior of Viking-type suspension-line material under dynamic loading conditions. Results indicate that there is a decrease in both rupture-load capability and elongation at rupture as the test strain rate is increased. Preliminary examination of force-strain characteristics indicates that, on the average, the material exhibits some type of viscous effect which results in a greater force being produced, for a particular value of strain, under dynamic loading conditions than that produced under quasi-static loading conditions. A great deal of uncertainty exists in defining a priori the tensile properties of viscoelastic materials, such as nylon or dacron, under dynamic loading conditions. Additional uncertainty enters the picture when woven configurations such as suspension, line material are considered. To eliminate these uncertainties, with respect to the Viking parachute configuration, a test program has been conducted to obtain data on the tensile properties of Viking-type suspension-line material over a wide range of strain rates. Based on preliminary examination of these data, the following conclusions can be drawn: 1. Material rupture-load capability decreases as strain-rate is...

Reviews

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