SPRAY-LINING HYBRID: CHARACTERISTICS

MAXIMUM LEVELS ATTAINED THROUGH F.A.A. SPECIFICATION STANDARD

LOCATION: PATRICK A.F. BASE, CAPE CANAVERAL AIR STATION

LATEST TEST DATE: YEAR:2006MO:D:MARCH:11 **(earliest yr:92mo:03d:09)**

3

AVERAGE TENSILE STRENGTH= 122 Mpa DENSITY=1.7 g/cm MAXIMUM=9,109 PSI

15 to 20 cm long pieces of 20-24 gauge cured (Hammerhead) epoxy

MATERIALS & SUPPLIES TO SPECIFY DEFINITION

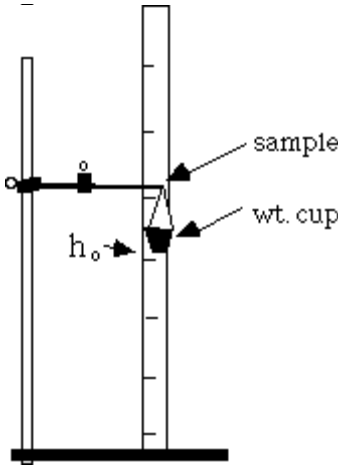
ring stand

adjustable single-burette clamp

meter stick

small paper cup (a 1-oz) paper cup works well)

variable masses (lead shot or small ring-washers) Diagram of Set-up:

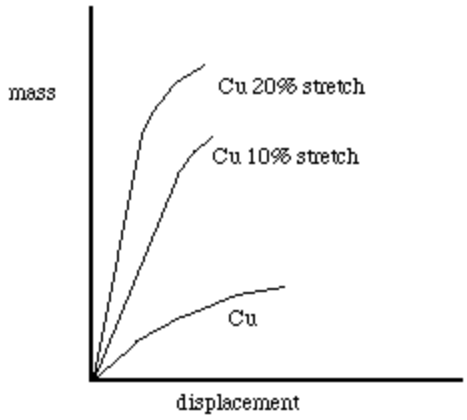


Data:

Sample table

mass	ht.	disp.

Sample Graph:



Analysis: Full control of strength levels & behavior attributes dependent upon A : B mix ratio conditions. Highest tensile strength is achieved at minimum elongation or deformation yield desirable as anti-stick behavior. Mix for tensile strength below 7,800 PSI results as maximum wear resistance. Mix for tensile strength below 2,610 PSI provides maximum elongation or deformation yield, desirable as anti-slip or flexible behavior.

TEAR FAILURE=10,004 PSI

TENSION FAILURE=9,112 PSI

COMPRESSION STRENGTH TO ULTIMATE YIELD POINT=31,659 PSI

ELONGATION=VARIABLE

YIELD STRENGTH =NO DEFORMATION > 7,886 PSI

ULTIMATE STRENGTH=126-1221 Mpa DENSITY=1.7 g/cm^3 ; > 10,000 < 10,005 PSI

100 TESTS PERFORMED; MAX. DEVIATION + or – 7.6% (standard deviation=2.12%)

DEFINITION:
Tension is a reaction force applied by a stretched string (rope or a similar object) on the objects which stretch it. The direction of the force of tension is parallel to the string, towards the string. Tension exists also inside the string itself: if the string is considered to be composed of two parts, tension is the force which the two parts of the string apply on each other. The amount of tension in the string determines whether it will break, as well as its vibrational properties, which are used in musical instruments.
The magnitude of the force of tension typically increases with the amount of stretching. For small stretching, the force is often described by Hooke's law.
String-like objects in relativistic theories, such as the strings used in some models of interactions between quarks, or those used in the modern string theory, also possess tension. These strings are analyzed in terms of their world sheet and the energy is then typically proportional to the length of the string. As a result, the tension in such strings is independent of the amount of stretching.