



STRUCTURAL TESTING

MOISTURE CONTENT	IMPACT ABSORPTION ENERGY	SHEAR STRENGTH	COEFFICIENT FOR ELASTICITY
8% - 10%	148 kgf/cm ³	148 kgf/cm ³	1,253,520 Kgf/cm ²

Dimensional Stability:

During a linear expansion/contraction test program in which **Silkroad®** bamboo planks were subjected to a 50% relative humidity change over a 48h period the bamboo planks showed a change in width of 0.06% compared to 0.47% for oak. No signs of de-lamination were detected (Ortech Corporation). Silkroad bamboo will not expand and contract as much as oak flooring.

Internal Bond Strength:

The internal bond strength of Silkroad bamboo was determined to be 2107 Newtons compared to 1938 Newtons for oak (Ortech Corporation). A Silkroad bamboo flooring installation is less likely to fail by splitting than oak.

SURFACE TESTING

Abrasion Resistance:

According to ASTM 5230 "Taber Abrasion Test", the wear index for Silkroad bamboo is 270 (Forintek Canada Corporation).

Hardness:

The hardness of Silkroad bamboo plank flooring (Natural Horizontal) was determined to have a hardness rating of 7.82 kn. (1555 hardness rating) using the ASTM 1037 Hardness Test. Compared to hard maple, Silkroad™ bamboo is 7% harder and 27% harder than red oak (Forintek Canada Corporation.).

EMISSIONS TESTING

TVOC Testing:

Results from the ASTM D5116-90 "Standard Guide for Small-Scale Environmental Chamber Determinations of Organics from Indoor Materials/Products", indicate that the emission rate for total volatile organic compounds (TVOC's) was 0.017 µg/m².hr for Silkroad bamboo. The Ecologo guideline is 0.05 µg/m².hr (Ortech Corporation).

Formaldehyde Testing:

According to the results from ASTM D6007 "Standard Guide for Small-Scale Environmental Chamber Determinations of Organics from Indoor Materials/Products", the formaldehyde emission rate for Silkroad bamboo was "non-detected" (Forintek Canada Corp.).

FIRE TESTING

Flammability:

According to ASTM E648 "Critical Radiant Panel Test", bamboo passed with a Class 1 rating per NFPA. This means that bamboo flooring can be used in all classes or types of buildings in the U.S. (U. S. Testing Company).

Smoke Density:

When bamboo flooring was tested according to ASTM E622 "Smoke Density", bamboo was found to have considerably lower smoking properties than the leading oak product (United States Testing Company).