STORK
Materials Technology

Stork Southwestern Laboratories

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Attention: Bill Reinhardt
Rumber Materials, Inc.
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W/O. No.: RUM004-08-05-91678-1
P.O. No.:
Report Date: 8/11/2005
Date of Service: 8/11/2005

Identification: Tongue and Groove Rubber Composite Boards

MODULUS DETERMINATION
Method: ASTM D198
Loading across two points

Sample	Span:Depth Ratio	Modulus of Elasticity, psi (Flexural Modulus)
L1	32:1	32,465
L2	32:1	33,654
Average	---	33,060
6040 board	35:1	23,960

Based on a material thickness of 1.375, and a span-to-depth ratio of 32:1, the support rollers were spaced 44" apart; that number is divided into thirds, to indicate where the loading rollers are placed on the top of the board. This equaled 14.6". This means that from the top center of the board, a load is applied at 7.3" in both directions from center, and that two support rollers would be found on the underside, still at 44" span, or 14.6" out from the top load roller in both directions.

Tests on materials in July of 2005, used a span:depth ratio of 35:1. It is based on placing the supports under the board at certain distances. Previous had a span of 52", while today's material was tested at a span of 44". The lengths supplied today were 48", so we could not test the new material at 52" span. The previous result for the 52" span was a modulus of 23,960 psi. Although we tested at a shorter span, which will naturally add to the stiffness (modulus) value, it does appear that the latest supplied material, with certain additives, would produce a higher modulus.

Respectfully Submitted

Terry Wilt
Manager, Product Evaluation

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Identification: Tongue and Groove Rubber Composite Boards

MODULUS DETERMINATION
Method: ASTM D4761
Loading at one central point

Sample	Span:Depth Ratio	Modulus of Elasticity, psi
L1	32:1	24,763
L2	32:1	21,594
Average	---	23,179
6040 board	35:1	15,290

The support rollers are spaced 44" apart, or 22' off of center. A single roller is placed across the center of the board, and loaded downward to produce a flexural load. It is identical to the two point load test, except only one centrally placed roller is used to apply the load.

Tests on materials in July of 2005, used a span:depth ratio of 35:1. It is based on placing the supports under the board at certain distances. Previous had a span of 52", while today's material was tested at a span of 44". The lengths supplied today were 48", so we could not test the new material at 52" span. The previous result for the 52" span was a modulus of 15,290 psi. Although we tested at a shorter span, which will naturally add to the stiffness (modulus) value, it does appear that the latest supplied material, with certain additives, would produce a higher modulus.

Respectfully Submitted

Terry Wilt
Manager, Product Evaluation