

Intertek Testing Services

TEST REPORT

CLIENT

Cedar Shake & Shingle Bureau
275-515 116th Avenue, NE
Bellevue, WA
98004-5294

PRODUCT TESTED

Cedar Roof Shakes

TESTING PROTOCOL

UL 2218
Impact Resistance of Prepared Roof Covering Materials

REPORT PREPARED BY:

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PREFACE

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INTRODUCTION

At the request of The Cedar Shakes & Shingle Bureau, the Coquitlam, B.C. branch of Intertek Testing Services NA Ltd/Warnock Hersey has conducted impact testing on a pre-prepared cedar roof deck sample in accordance with UL 2218 (Impact Resistance of Prepared Roof Covering Materials).

The sample was prepared by The Cedar Shake & Shingle Bureau, at their facility and submitted for testing.

PRODUCT DESCRIPTION

A 2 x 4 wood frame was prepared and sheathed with 1 x 4 inch spaced sheathing. The sheathing was covered with one layer of #30 asphalt saturated felt.

The roofing was applied with a 10-inch exposure, beginning with a starter course and followed by one complete application of handsplit, resawn cedar shakes. Each shake was attached using two 2-inch hot dipped galvanized roof shake nails, spaced in accordance with code requirements.

TESTS AND TEST RESULTS (UL 2218 - *Impact Resistance of Prepared Roof Covering Materials*)

Test Method:

The ambient temperature of the test area was 20 degrees C. A 2-inch diameter steel ball was dropped from a height of 20 feet onto the roof sample at six different locations. At each location two drops must hit the sample within 0.5 inches of each other.

Test Requirements:
surface and

The prepared roof covering materials exposed surface, back underneath layers shall show no evidence of tearing, fracturing, cracking, splitting, rupture or other evidence of opening of the prepared roof-covering layer.

Deck covered with:	Handsplit, resawn, shakes
Thickness at butt end:	¾ inch
Drop Height:	20 feet
Ball Diameter	2 inches
Ball Weight:	522.2 g
Moisture Content:	6 to 10%

CONCLUSION

The test deck covered with ¾ inch x 24 inch handsplit resawn shakes has met the requirements of UL 2218 after testing with a 2 inch diameter ball at a 20 foot drop.

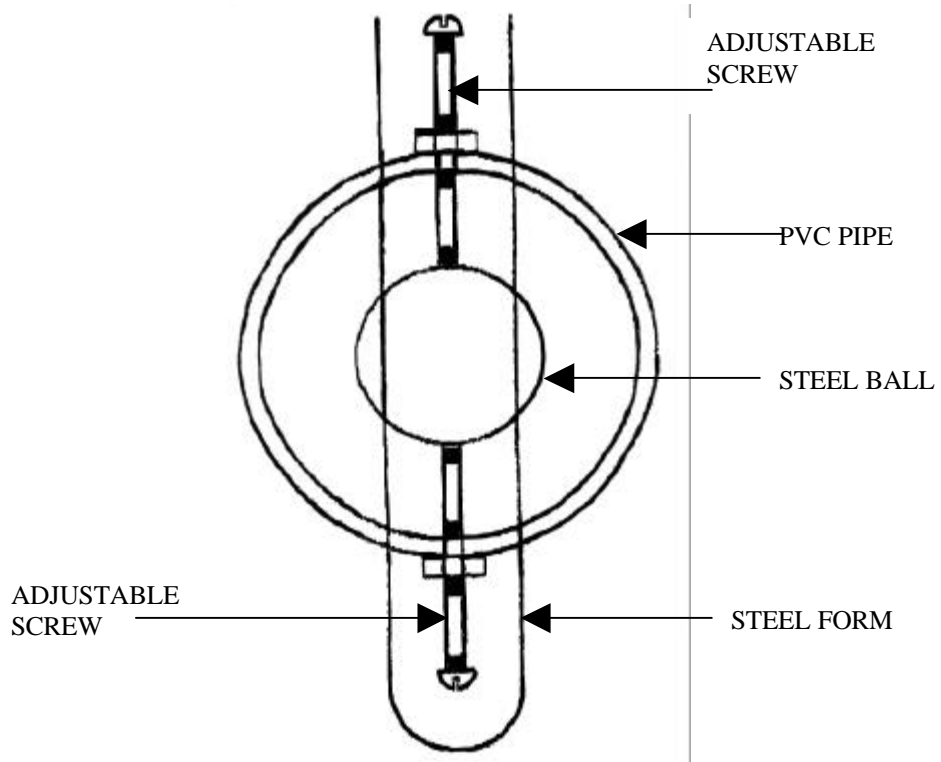
After testing, the deck was inspected for tearing, fracturing, cracking, splitting, rupturing or other damage. The prepared roof covering material exposed surface, back surface and underneath layers as well as the spaced sheathing was all inspected when the deck was dismantled for observation.

TESTED BY

Intertek Testing Services
Geri Nishio, Technician Building Sciences Division

Reviewed By: Sheldon Warman, P. Eng., Manager, Physical Testing and Certification.

Figure 6.2
Release device



5.4 Table 5.1 is to be used to determine the drop height and pipe diameter to be used with each respective steel ball size (diameter).

Table 5.1
Drop height and pipe diameter

Steel ball diameter		Distance		Schedule 40 PVC pipe ID	
Inches	(mm)	Feet	(m)	Inches	(mm)
1-1/4	(31.8)	12.0	(3.7)	2	(50.8)
1-1/2	(36.1)	15.0	(4.6)	2	(50.8)
1-3/4	(44.6)	17.0	(5.2)	3	(76.2)
2	(60.8)	20.0	(6.1)	3	(76.2)