

This technical data sheet is based upon the CSC Manu-Data[®] format.

August 2011

1. Product Name

Enviroshake[®] Roofing

2. Manufacturer

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Enviroshake[®] gazebo roof

3. Product Description

DESCRIPTION

Enviroshake is a composite roof shake that authentically emulates the look of a natural “silvered” cedar shake, that competes in the specialty and premium roof markets.

BASIC USE

Enviroshake composite shakes are used for roofing and siding applications. Properly installed shakes provide long lasting weather protection and a rustic aesthetic look weatherproofing system.

BENEFITS

Enviroshake gives the pleasing aesthetic of cedar shakes with lifetime performance and with minimal amount of maintenance.

The 8 profiles that the Enviroshake comes in are made from the 3D images of real cedar shakes, to ensure the wood grains, thickness, and sizes are all true to nature.

They weather to a silver “cedar” look in 3 – 9 months depending on UV exposure.

No special tools are needed to install Enviroshake composite shake roofing.

Enviroshake[®] comes with a lifetime warranty for residential applications and a 50 year warranty for commercial applications.

LIMITATIONS

Enviroshake[®] should not be installed over existing asphalt shingles.

TYPES AND SIZES

Enviroshake[®] comes in widths of 12 inch, (pre-molded 4 to 8 inch, 8 to 4 inch and 6 to 6 inch profiles) each with a length of 20 inches. Each shake is tapered and measures approximately ½ inch at the butt end and narrows to approximately an 1/8 inch (resembling a taper-sawn cedar shake)

The shakes are bundled with white strapping bearing the Enviroshake[®] script, labeled, and shrink-wrapped on skids (7 square/70 bundles per skid) for shipping. Each bundle contains 13 pieces of varied profiles.

There are 10 bundles to a “Square”. Ridge caps are a 12 inch wide one-piece shake, custom formed to the specification of the roof slope and are packaged in bundles of 10 pieces using white strapping bearing the Enviroshake[®] script.

COVERAGE

1 square covers 100 square feet. The minimum slope is 4:12 although under special circumstances a lower slope installation can be carried out. Refer to the Enviroshake Low-Slope Installation Guide for further details.. The maximum exposure is 9 inch. There is no limit on the maximum slope.

4. Technical Data

Copies of test procedures and results are available upon request.

Canadian Construction Materials Centre (CCMC) <i>Technical Guide Master Format October 11, 2002</i>		International Conference of Building Officials (ICC) <i>Acceptance Criteria for Special Roofing Systems- Protocol AC07</i>		Building Materials Evaluation Commission (BMEC) Dec. 1999	
Testing Procedure	Standard	Testing Procedure	Standard	Testing Procedure	Standard
A. Physical and Mechanical Properties		1. Weatherometer	ASTM G23 ASTM G26 ASTM D790	1. Impact Testing	ASTM D2794
1. Density	ASTM D792	2. Roof classification		2. Water Absorbtion	ASTM D570
2. Impact Izod	ASTM D256 (Method A (1))	-fire retardant	UBC Standard 15-2 ICBO 4.9	3. Wind Resistance	ASTM D3161
3. Dimensional Stability	CGSB-37.58-M86	Accelerated weathering and ignition/burning rate tests	UBC Standard 26-6 UBC Standard 26-7 ICBO 4.9	4. Tear Strength/Nail Head Resistance	ASTM D1037
4. Water Absorption	CCMC 6.4.1	3. Wind Uplift	Any test (dynamic, static and structural calculations)	5. UV Exposure	ASTM G-53
5. Strain Energy	ASTM D5147, CCMC 64.3	4. Wind-Driven Rain	ICBO 4.3	6. Freeze Thaw	ASTM C666
6. Modulus of rupture (static bending)	ASTM D1037	5. Uplift-Bend	ICBO 4.4		
7. Ozone resistance	ASTM D1149	6. Penetration	ICBO 4.2		
B. Performance Roofing System		7. Temperature-cycling	ICBO 4.8		
1. Uplift bend	CCMC 64.4	8. Flexural strength	ICBO 3.5.2 UBC Standard 15-5		
2. Traffic load	ASTM E661, DADE PA 100-95				
3. Wind uplift	DADE PA 100-95				
4. Dynamic pressure water infiltration	DADE PA 100-95				
5. Nail pull-through	ASTM D1037				
6. Accelerated weathering	ASTM G155, CCMC 6.4.7				
7. Heat ageing	CCMC 6.4.8				
8. Freeze thaw	CCMC 6.4.9				



Enviroshake® used in commercial application

APPLICABLE STANDARDS

ASTM International

- ASTM D7349/D7349M, Standard Test Method for Determining the Capability of Roofing and Waterproofing Materials to Seal around Fasteners.
- ASTM E108, Standard Test Methods for Fire Tests of Roof Coverings.

Canadian General Standards Board (CGSB)

- CGSB-37.58-M86, Membrane, Elastomeric, Cold-Applied Liquid, for Non-Exposed Use in Roofing and Waterproofing.

Miami-Dade Construction Standards (DADE)

- DADE PA 100-[2000], Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems.

Underwriter's Laboratories

- UL 2218, Impact Resistance of Prepared Roof Covering Materials, Class 4.

US Green Building Council

- USGBC: LEED® NC Version 2.2.

APPROVALS

- American Society for Testing and Materials Limited.
- National Building Code of Canada.
- Canadian General Standards Board: Stability Testing - Products are tested

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at temperature cycles ranging from -40°F (-40°C) to 160°F (71°C).

- National Building Code of Canada.
- Uniform Building Code: UV Testing - 2000 hours of accelerated weathering tests are completed to ensure no evidence of change in physical properties

ENVIRONMENTAL CONSIDERATIONS

Do not walk on Enviroshake composite roofing shingles while they are ice, frost or snow covered.

SUSTAINABILITY CONSIDERATIONS

For information on LEED Prerequisites and Credits associated with this product, refer to the “LEED Brochure on the Enviroshake web site at <http://www.enviroshake.com> .

5. Installation

Enviroshake should be installed as a new roofing system.

Install drip edge, valley and ridge flashings, eaves protection and breathable synthetic underlayment before installing shingles.

Use double starter course at bottom edges, including vertical and high slope roof surfaces.

Fasten each shake with four 1-1/2 inch stainless steel nails minimum regardless of shake width. Although stainless steel nails are preferred hot-dipped galvanized nails are also acceptable.

Lay each consecutive row of shakes at 9 inch exposure, ensuring that there is no keyway on keyway.

Beginning with first full course of shakes, install breathable synthetic underlayment strips over top portion of each shake.

Lay each consecutive row of shakes to ensure synthetic underlayment covers top 3 inches minimum of each shake in each row. Cut shakes to fit accurately around roof projections.

Use only uncut factory edges kept flush along rake and gable ends and where ends are exposed.

Install ridge caps over eaves protection at ridges.

Install prefinished soffits and fascia material where indicated.

Install roof ventilators and other roofing accessories where indicated.

The minimum roof slope on which Enviroshake is recommended is 4:12. It is possible, however, to apply Enviroshake successfully to solid sheathed roofs of lower slope providing a special method of application is followed. The prescribed method provides a double roof on which the Enviroshake is applied to a lattice-like framework embedded in a bituminous surface coating.

selected for Enviroshake, should be nailed across the spacers to form a lattice-like nailing base. For example, if Enviroshake is to be installed at a weather exposure of 9 inch, the nailing strips would also be spaced at 9 inch on the centers. When 1 x 4 inch spaced sheathing is installed at 9 inch on center, additional 1 x 4 inch boards must be installed.

Finally Enviroshake is applied in the normal manner with a starter course at the eave and a breathable synthetic interlay between each course of shakes.

For more detailed installation instructions refer to the Enviroshake Installation Guide.

Refer to Enviroshake® Installation Guide videos at <http://www.enviroshake.com/photos-and-video> .



Enviroshake® used in commercial application

A torch-on or similar approved waterproof membrane should be applied over the roof deck. Consult your local building official for approved products in your area. With the final torch-on application 2 x 4 spacers of preserved treated lumber are embedded in the bituminous coating. These spacers are installed over the rafters and extend from eave to ridge. Check with your local building official for their preference in your area.

Next, 1 x 4 or 1 x 6 inch nailing strips, spaced according to weather exposure

6. Availability and Costs

AVAILABILITY

Order composite roof shakes 4 – 6 weeks before required delivery dates.

COSTS

Contact Enviroshake Inc. for current product costs.

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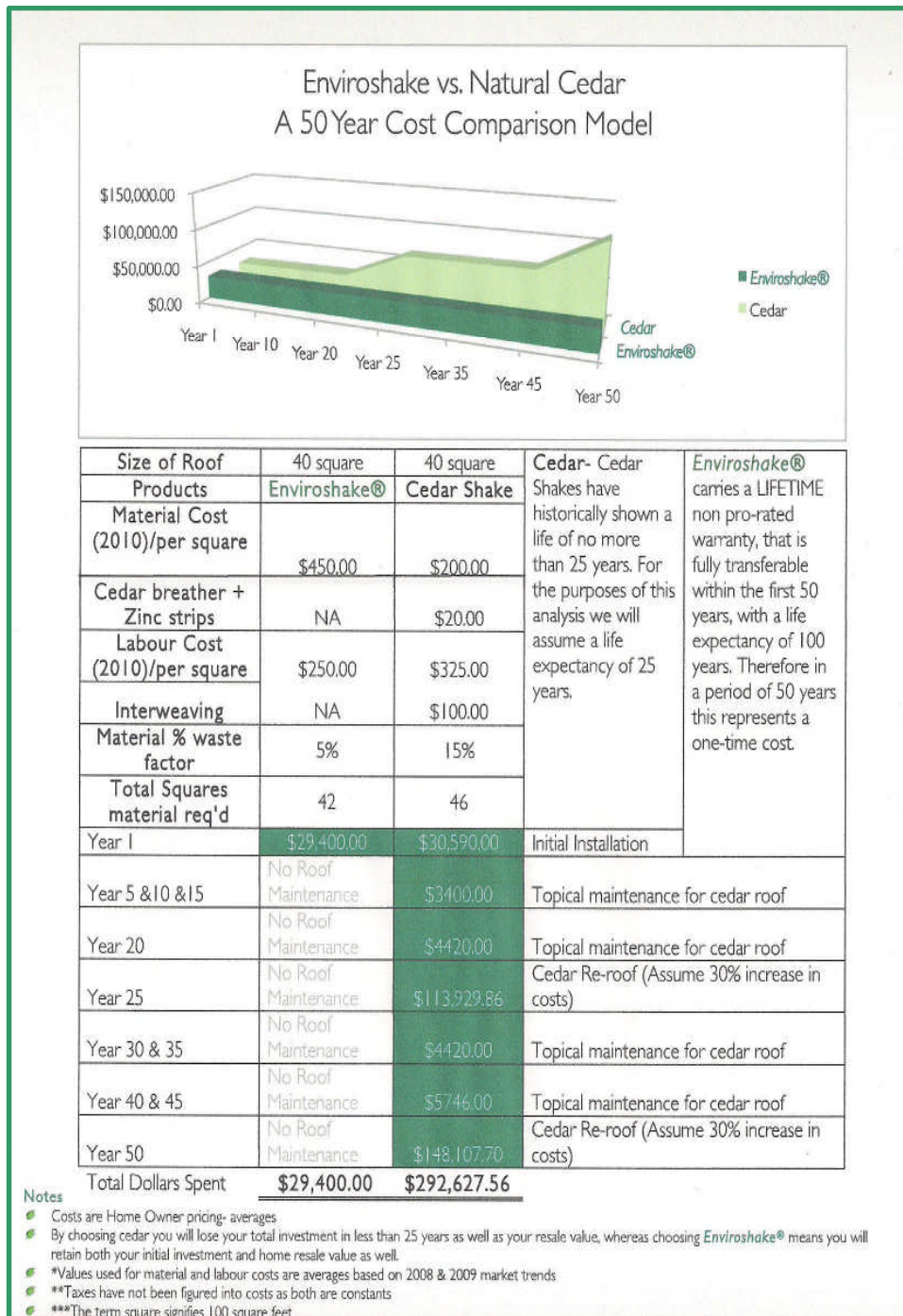
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9. Technical Services

Technical representative will visit project site as required during construction.

10. Filing Systems

- MasterFormat™ 07 31 34.
- OmniClass™
Table 21 02 10 20 90.
Table 22 07 31 34.
Table 23 13 39 21.



Size of Roof	40 square	40 square	Cedar- Cedar Shakes have historically shown a life of no more than 25 years. For the purposes of this analysis we will assume a life expectancy of 25 years.	Enviroshake® carries a LIFETIME non pro-rated warranty, that is fully transferable within the first 50 years, with a life expectancy of 100 years. Therefore in a period of 50 years this represents a one-time cost.
Products	Enviroshake®	Cedar Shake		
Material Cost (2010)/per square	\$450.00	\$200.00		
Cedar breather + Zinc strips	NA	\$20.00		
Labour Cost (2010)/per square	\$250.00	\$325.00		
Interweaving	NA	\$100.00		
Material % waste factor	5%	15%		
Total Squares material req'd	42	46		
Year 1	\$29,400.00	\$30,590.00	Initial Installation	
Year 5 & 10 & 15	No Roof Maintenance	\$3,400.00	Topical maintenance for cedar roof	
Year 20	No Roof Maintenance	\$4,420.00	Topical maintenance for cedar roof	
Year 25	No Roof Maintenance	\$113,929.86	Cedar Re-roof (Assume 30% increase in costs)	
Year 30 & 35	No Roof Maintenance	\$4,420.00	Topical maintenance for cedar roof	
Year 40 & 45	No Roof Maintenance	\$5,746.00	Topical maintenance for cedar roof	
Year 50	No Roof Maintenance	\$148,107.70	Cedar Re-roof (Assume 30% increase in costs)	
Total Dollars Spent	\$29,400.00	\$292,627.56		

- Notes
- Costs are Home Owner pricing- averages
 - By choosing cedar you will lose your total investment in less than 25 years as well as your resale value, whereas choosing Enviroshake® means you will retain both your initial investment and home resale value as well.
 - *Values used for material and labour costs are averages based on 2008 & 2009 market trends
 - **Taxes have not been figured into costs as both are constants
 - ***The term square signifies 100 square feet

7. Warranty

50 year warranty for commercial installations and lifetime warranty for residential installations.

Warranty is dependent upon installation by a certified Enviroshake Inc. installer.

8. Maintenance

Composite shake roofing should be regularly inspected for minor weathering damage and broken shingles replaced as necessary. No special tools are required for roof maintenance.