



ICC-ES VAR Environmental Report VAR-1016

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DIVISION: 07 00 00—THERMAL AND MOISTURE PROTECTION

Section: 07 41 43—Composite Roof Panels

REPORT HOLDER:

ONDULINE S.A.

EVALUATION SUBJECT:

ROOFING SHEETS; ROOFING TILES; RIDGE CAPS AND ROOFING UNDER-LAYERS: SEE TABLE 1 FOR PRODUCT DESIGNATIONS

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1.0 EVALUATION SCOPE

Compliance with the following environmental criteria:

ICC-ES Environmental Criteria for Determination of Recycled Content of Materials (EC101), dated March 2012.

Compliance eligibility with the applicable sections of the following green building rating systems, standards and codes:

- 2015 and 2012 *International Green Construction Code*® (2015 IgCC and 2012 IgCC) (see Table 2 for details)
- 2019 California Green Building Standards Code (CALGreen), Title 24, Part 11 (see Table 3 for details)
- 2015, 2012 and 2008 National Green Building Standard (ICC 700-2015, ICC 700-2012 and ICC 700-2008) (see Table 4 for details)
- LEED 2009 for New Construction and Major Renovations (see Table 5 for details)
- LEED 2009 for Schools New Construction and Major Renovations (see Table 6 for details)
- LEED for Homes 2008 (see Table 7 for details)
- ANSI/GBI 01-2010, Green Building Assessment Protocol for Commercial Buildings (see Table 8 for details)

2.0 USES

Onduline Roofing Sheets and Onduline Roofing Tiles are used as steep-slope roof covering materials. Onduline Ridge Caps are used in conjunction with Onduline Roofing Tiles. Onduline Under-layers are used as under-roof tile roof coverings.

3.0 DESCRIPTION

3.1 Onduline Roofing Sheets:

Onduline Roofing Sheets are corrugated roofing sheets consisting of a homogenous base sheet composed of cellulose fiber that is pre-pigmented with resin and coloring and impregnated with bitumen asphalt under pressure and

heat. The sheets are produced in a variety of size and colors. Onduline Roofing Sheets contain the type and percentage of recycled content, by weight, as set forth in Table 1.

3.2 Onduline Roofing Tiles:

Onduline Roofing Tiles are corrugated roofing tiles that have the same material composition as the roofing sheets described in Section 3.1, but the tiles are smaller in size. Onduline Roofing Tiles contain the type and percentage of recycled content, by weight, as set forth in Table 1.

3.3 Onduline Roofing Under-layers:

The Onduline Roofing Under-layers are ribbed underlayment sheets composed of bitumen and cellulose fibers. Onduline Roofing Under-layers contain the type and percentage of recycled content, by weight, as set forth in Table 1.

3.4 Onduline Ridge Caps:

The Onduline Ridge Tiles are corrugated preformed tiles that have the same material composition as the roofing tiles described in Section 3.2 and are used to provide weather protection at roof ridges. Onduline Ridge Tiles contain the type and percentage of recycled content, by weight, as set forth in Table 1.

4.0 CONDITIONS

4.1 Code Compliance:

See ICC-ES [ESR-1957](#) for compliance with code requirements for the Onduline North America, Inc. Ondura Roofing Sheets and Tiles.

Evaluation of the other Onduline Roofing Sheets, Roofing Tile, Ridge Caps and Roofing Under-layers for compliance with the International Codes is outside the scope of this evaluation report, and evidence of compliance with all applicable code requirements must be submitted by the permit applicant to the Authority Having Jurisdiction (AHJ) for approval.

4.2 Green Rating Systems, Standards and Code Eligibility:

The information presented in Tables 2 through 8 of this report provides a matrix of areas of evaluation and corresponding limitations and/or additional project-specific requirements and offers benefit to individuals who are assessing eligibility for credits or points.

The final interpretation of the specific requirements of the respective green building rating system, standards and/or code rests with the developer of that specific rating system or standard, or the AHJ, as applicable.

Compliance for items noted as “Verified Attribute” is subject to any conditions noted in the tables. Decisions on compliance for those items noted as “Eligible for Points” in Tables 2 through 8 rest with the user of this report, and those items are subject to the conditions noted. The user is advised of the project-specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. Rating systems or standards often provide supplemental information as guidance.

5.0 BASIS OF EVALUATION

The information in this report, including the “Verified Attribute,” is based upon ICC-ES EC101. (Evaluation applies to IgCC Section 505.2.2; CALGreen Sections A.4.405.3 and A5.405.4; ICC 700 Section 604.1; LEED NC MR Credit 4; LEED Schools MR Credit 4; LEED Homes MR Credit 2.2; and ANSI/GBI 01 Section 10.2.1.1.)

6.0 IDENTIFICATION

6.1 Onduline Roofing Sheets, Roofing Tiles, Roofing Caps and Roofing Under-layers are identified with the manufacturer’s name, address and telephone number; the product name; and the VAR Environmental Report number (VAR-1016).

6.2 The report holder’s contact information is the following:

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TABLE 1—MINIMUM RECYCLED CONTENT BY WEIGHT SUMMARY

PLANT LOCATION	PRODUCT TYPE	PRODUCT NAME	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% MINIMUM RECYCLED CONTENT
France	Ridge caps	Onduline® Ridge C100 Classic SR	0	48	48
		Onduline® Ridge C100 Classic DR	0	48	48
		Onduline® Ridge C100 Classic SRP	0	48	48
		Onduline® Ridge C100 Classic DRCP	0	47	47
		Onduline® Ridge C200 Classic SR	0	48	48
		Onduline® Ridge C200 Classic DR	0	48	48
		Onduline® Ridge C200 Classic DRV	0	48	48
		Onduline® Ridge C100 Classic DRV	0	48	48
		Onduline® Ridge C100 Classic DRCV	0	47	47
		Onduline® Ridge C100 Classic DRP	0	47	47
		Onduline® Ridge C100 Classic SRV	0	48	48
	Roofing tiles	Onduvilla® DRP	0	46	46
	Roofing sheets	Ondeco 9 Black	0	48	48
		Ondeco 10 Black	0	47	47
		Onduline® Classic SRP	0	47	47
		Ondeco 9	0	46	46
		Ondeco 10	0	45	45
		Onduline® Classic DRCP	0	46	46
		Onduline® Classic DRC	0	48	48
		Onduline® Classic DRP	0	46	46
		Ondever 63	0	46	46
		Onduline® Classic DRV	0	47	47
		Onduline® Classic DRCV	0	47	47
		Onduline® Classic SR	0	48	48
		Onduline® Classic DR	0	48	48
		Onduline® Classic 40	0	49	49
		Onduline® Classic 235 DRCP	0	46	46
		Onduline® Classic 235 DR	0	48	48
		Duro-Isola Marfil 32	0	47	47
		Onduline® Ondutoit	0	47	47
		Onduline® Ondutoit 9	0	47	47
		Duro-E	0	47	47
		Ondalux ECO Intense	0	47	47
		Ondalux ECO Color	0	45	45
		SB25	0	48	48
		Onduline® T95	0	48	48
		Onduline® T235	0	48	48
		Onduline® T95 Plus	0	46	46
		Onduline® T235 Plus	0	46	46
		Onduline® T220 Plus	0	46	46
		Onduline® T50	0	47	47
		Onduline® T380	0	47	47
		Onduline® T470	0	47	47
		Onduline® T940	0	47	47
		WL T50 UL	0	47	47
		WL T235 UL	0	48	48
		Onduline® AR3222	0	48	48
		WL T95	0	48	48
		WL T235	0	49	49
	WL T235 Plus	0	46	46	
Onduline® T50 Plus	0	45	45		
Valley	Valley Classic DR	0	47	47	
	Valley Classic DRP	0	44	44	

PLANT LOCATION	PRODUCT TYPE	PRODUCT NAME	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% MINIMUM RECYCLED CONTENT
TABLE 1—MINIMUM RECYCLED CONTENT BY WEIGHT SUMMARY (Continued)					
Turkey	Ridge caps	Onduline® Ridge C200 SR	0	50	50
		Onduvilla® Ridge C200 SR	0	50	50
		Onduline® Andromeda Ridge C200 SR	0	44	44
		Onduline Ridge C200 SR 130 T3.5	0	50	50
	Roofing tiles	Onduvilla® SR	0	50	50
		Onduvilla® FR-painted	0	42	42
		Onduvilla® FR	0	44	44
		Onduvilla® DR	0	50	50
	Roofing sheets	Onduline® HR SR	0	49	49
		Onduline® HR DR	0	49	49
		Onduline® Andromeda SR	0	44	44
		Onduline® Andromeda SRP	0	42	42
		Onduvar 2 HR	0	49	49
		Onduline® HR-B	0	44	44
		Onduline® Zigana	0	50	50
		Onduline® FIT	0	49	49
		Onduline® XHR	0	51	51
		Onduline® Andromeda FR SR	0	44	44
		Ondalux SR	0	49	49
		Ondalux Smart SR130	0	49	49
Onduline® Zigana Tile SR130	0	51	51		
Under-layers	Onduline® T50M	0	48	48	
Spain	Roofing tiles	Onduvilla® DR	0	48	48
		Onduvilla® DRP	0	46	46
		Onduvilla® DRCP	0	45	45
	Roofing sheets	Onduline® Classic SR	0	48	48
		PPHR 85 T	0	49	49
		Onduline® Classic DRC	0	48	48
		BT 190 Cuba	0	48	48
		Onduline® U18	0	46	46
		Onduline® U21	0	47	47
		Onduline® Classic 235 DR	0	48	48
		Onduline® Classic DRCV	0	47	47
		Onduline® Classic 235 DRCV	0	47	47
		Onduline® 195 Classic DRP	0	46	46
		Onduline® ECO SR	0	48	48
	Onduline® ECO 8 SR	0	48	48	
	Onduline® Classic 32 DRP	0	46	46	
	Under-layers	Onduline® T235	0	48	48
		WL T235 UL	0	49	49
		Onduline® T380	0	47	47
		Onduline® T470	0	47	47
WL T50 UL		0	47	47	
Onduline® T50		0	47	47	
Onduline® T940		0	47	47	
Onduline® T95		0	48	48	
Onduline® T235 DRP		0	46	46	
WL T235		0	49	49	
WL T235 SRP	0	46	46		
Onduline® T95 DRP	0	46	46		

PLANT LOCATION	PRODUCT TYPE	PRODUCT NAME	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% MINIMUM RECYCLED CONTENT
TABLE 1—MINIMUM RECYCLED CONTENT BY WEIGHT SUMMARY (Continued)					
Poland	Ridge caps	Onduline® Ridge C100 Classic SR	0	51	51
		Ondalux Eco Ridge C100 SRV	0	50	50
		Onduline® Ridge C100 Classic DR	0	51	51
		Onduline® Ridge C200 Classic DR	0	51	51
	Roofing sheets	Onduline® Classic SR	0	51	51
		Onduline® Standard	0	50	50
		SB 25	0	52	52
		Onduline® DIY	0	51	51
		Bituline	0	52	52
		Onduline® Easyfix	0	50	50
		Onduline® Easyfix SRV	0	50	50
		Ondever 63	0	48	48
		Onduline® Base SRV	0	50	50
	Under-layers	Onduline® Base	0	50	50
		Onduline® Easyline SR	0	50	50
		Onduline® Easyline	0	51	51
		Ondalux ECO SRV	0	50	50
		Onduline® Easyline SRV	0	50	50
		Onduline® T220	0	51	51
		WL T220 UL	0	51	51
Onduline® T190		0	51	51	
WL T190 L		0	51	51	
Onduline® T95		0	51	51	
WL T95		0	51	51	
Onduline® T190L26		0	51	51	
Russia	Ridge caps	Onduline® Ridge 975 Classic SR	0	51	48
	Roofing tiles	Onduvilla® DR – 3D	0	48	48
		Onduvilla® DRP	0	46	46
		Onduvilla® DRCP	0	45	45
		Bituline	0	48	48
	Roofing sheets	Onduline® Classic SR	0	48	48
		Onduline® Smart	0	48	48
		Onduline® DIY	0	48	48
		Ondalux ECO Color	0	45	45
		Ondalux PPHR	0	47	47
		Onduvilla® Smart SRP	0	46	46
		Euroshifer	0	48	48
		Ondalux PPHR 11	0	47	47
		Onduvilla® Classic SR2	0	48	48
		Onduvilla® Smart 8	0	48	48
		Onduline® Tile SR110	0	48	48
		Onduline® Tile DR110	0	47	47
		Onduline® Tile DRC	0	47	47
		Onduline® Smart DRC	0	47	47
		Onduline® Smart SR130	0	48	48
Onduline® Tile SR130		0	48	48	
Onduline® Classic SRP	0	46	46		
Onduline® Classic DRP	0	45	45		
Onduline® Classic DRCP	0	45	45		

PLANT LOCATION	PRODUCT TYPE	PRODUCT NAME	% PRE-CONSUMER RECYCLED CONTENT	% POST-CONSUMER RECYCLED CONTENT	% MINIMUM RECYCLED CONTENT
TABLE 1—MINIMUM RECYCLED CONTENT BY WEIGHT SUMMARY (Continued)					
Brazil	Ridge caps	Onduline® Ridge C200 Classic DR	0	50	50
		Onduline® Ridge E200 Classic DR	0	50	50
	Roofing tiles	Onduvilla® DR	0	49	49
		Onduvilla® DRC	0	50	50
	Roofing sheets	Onduline® Classic SR	0	51	51
		Onduline® PPHR 85 T	0	51	51
		Onduline Classic DRC	0	50	50
		Coraline	0	49	49
		Tropica	0	48	48
		Onduline Classic DR	0	50	50
		Onduline® Classic 235 DR	0	50	50
		Tobacco Barn Sheet	0	50	50
		Onduline® Classic 235 DRC	0	50	50
		Onduline® DIY	0	50	50
		Onduline® 66 Classic DRV	0	49	49
		Onduline® Classic DR110	0	50	50
		Onduline® Classic 145 DRC110	0	50	50
Onduline® Classic 145 DR110	0	50	50		
Onduline® T235	0	50	50		
Malaysia	Ridge caps	Onduline® Ridge C100 Classic SR	0	47	47
	Roofing tiles	Onduvilla® DR	0	46	46
		XL-Tile	0	46	46
		Onduvilla® DRC	0	45	45
		Onduvilla® DRC-130	0	45	45
	Onduvilla® DR-130	0	45	45	
	Roofing sheets	Onduline® Classic DR	0	46	46
		Onduline® Easyline 10 DR	0	46	46
		ECO DR 8	0	45	45
		ECO DR 10	0	45	45
	Onduline® Classic 235 DR	0	46	46	
Under-layers	Onduline® T50H	0	47	47	
USA	Tile	Ondura® Regular Tile Painted 12	0	49	49
	Roofing sheets	Ondura® Matte-12	0	52	52
		Ondura® Matte-10	0	52	52
		Ondura® Matte DR-12	0	51	51
		Ondura® Matte ECO-12	0	51	51
		Ondura® Matte ECO-10	0	51	51
		Ondura® Matte ECO-8	0	51	51
		Ondura® Matte ECO-9	0	51	51
		Ondura® Matte ECO DR-12	0	51	51
		Ondura® Regular Painted-12	0	49	49
		Ondura® Regular Painted-10	0	49	49
		Ondura® International-12	0	49	49
		Ondura® International ECO-12	0	47	47
		Ondura® International ECO DR-12	0	47	47
		Ondura® Matte-9	0	52	52
		Ondura® Regular Painted-9	0	49	49
Ondura® 6V DRP	0	49	49		

TABLES 2 THROUGH 8

SECTION NUMBER	SECTION INTENT	POSSIBLE POINTS	CONDITIONS OF USE TO QUALIFY FOR POINTS	FINDING
TABLE 2—SUMMARY OF AREA OF ELIGIBILITY WITH THE 2015 AND 2012 INTERNATIONAL GREEN CONSTRUCTION CODE (IgCC)				
604.1	Recycled content building materials	----	Recycled content building materials shall comply with one of the following: 1. Contain not less than 25% combined post-consumer and pre-consumer recovered material, and shall comply with Section 505.2.3 2. Contain not less than 50% combined post-consumer and pre-consumer recovered material	•
TABLE 3—SUMMARY OF AREA OF ELIGIBILITY WITH THE 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE				
A4.405.3 A5.405.4	Recycled content	----	To achieve Tier 1 - Use materials with a postconsumer or preconsumer recycled content value (RCV) for a minimum of 10% of the total value, based on estimated cost of materials on the project. To achieve Tier 2 - Use materials with a postconsumer or preconsumer RCV for a minimum of 15% of the total value, based on estimated cost of materials on the project. recycled content value. RCV shall be determined as follows: RCV = (% PC X material cost) + 0.5 (% PI X material cost) Notes: 1. PC means post consumer waste. 2. PI means post industrial waste.	•
TABLE 4—SUMMARY OF AREA OF ELIGIBILITY WITH THE 2015, 2012 AND 2009 ICC-700 NATIONAL GREEN BUILDING STANDARD				
604.1	Use two or more major and/or minor building materials containing recycled content	2 6 max	2, 4 or 6 points may be earned when products are used with another major building component with recycled content of 25% < 50%; 50% < 75%; ≥ 75%, respectively.	•
TABLE 5—SUMMARY OF AREA OF ELIGIBILITY WITH USGBC'S LEED 2009 FOR NEW CONSTRUCTION				
MR 4	Recycled content	1 2 max	To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at least 10%, based on cost, of the total value of the materials in the project. To earn 2 points use 20% or more.	•
TABLE 6—SUMMARY OF AREA OF ELIGIBILITY WITH USGBC'S LEED 2009 FOR SCHOOLS				
MR 4	Recycled content	1 2 max	To earn 1 point use materials with recycled content such that the sum of postconsumer recycled content plus 1/2 of the preconsumer content constitutes at least 10%, based on cost, of the total value of the materials in the project. To earn 2 points use 20% or more.	•
TABLE 7—SUMMARY OF AREA OF ELIGIBILITY WITH USGBC'S LEED FOR HOMES 2008				
MR 2	Recycled content	1 2 max	To earn 0.5 point use roofing materials with recycled content with a minimum of 25% postconsumer. Preconsumer content is counted at 1/2 of the amount of the postconsumer content.	•
TABLE 8—SUMMARY OF AREA OF ELIGIBILITY WITH ANSI/GBI 01 – 2010				
10.1.2.1	Materials content – Assemblies	1 8 max	Recycled postconsumer or postindustrial (preconsumer) content materials accounted for 1% to 20% or more of building materials. Percentage is calculated as 100 x A (total cost or weight of recycled content materials) ÷ B (total cost or weight of all building materials).	•
•	= Verified attribute			