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ZENOVA LTD.

SOLAR REFLECTANCE INDEX TEST REPORT

SCOPE OF WORK
ROOF PRODUCTS PROGRAM TESTING PER ASTM C1371, ASTM C1549, ASTM E1980 AND ASTM D1005 ON INSULATING PAINT COATED ON METAL PANEL > WHITE

REPORT NUMBER
L1821.01-301-41 R0

TEST DATE
07/24/20

ISSUE DATE **REVISED DATE**
07/28/20 08/10/20

RECORD RETENTION END DATE
07/24/24

PAGES
8

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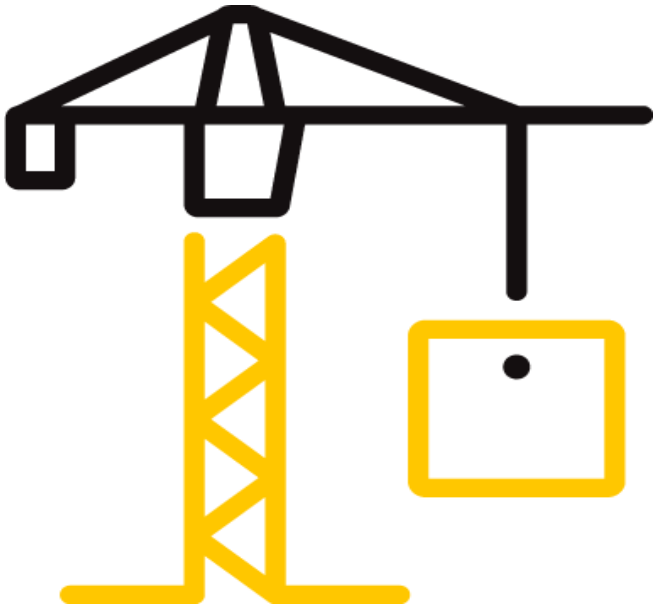

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Fresno, California 93706

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Facsimile: 559-764-4129
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TEST REPORT FOR ZENOVA LTD.
Report No.: L1821.01-301-41 R0
Date: 07/28/20

REPORT ISSUED TO

ZENOVA LTD.
15a Shenfield Road, Brentwood
Essex, United Kingdom CM158AG

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Zenova Ltd. to perform Energy Star® Roof Products Program testing in accordance with ASTM C1371, ASTM C1549, ASTM E1980 and ASTM D1005 on their Insulating Paint coated on Metal Panel > White, Metal Panels. Results obtained are tested values and were secured by using the designated test method. Testing was conducted at the Intertek B&C test facility in Fresno, California.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

Type:	Coated Metal Panel
Series/Model:	Zenova IP > Insulation Paint on Metal Panels - White
Unit Size:	4" x 6" (101.6 mm x 152.4 mm)

For INTERTEK B&C:

COMPLETED BY	Jerry A. Bontilao, BSME	**REVIEWED BY**	Tyler Westerling, P.E.
TITLE	Project Lead	**TITLE**	Operations Manager, IIRC
SIGNATURE	Digitally Signed by: Jerry Bontilao	**SIGNATURE**	Digitally Signed by: Tyler Westerling
DATE	08/10/20	**DATE**	08/10/20

JB:ss

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SECTION 3
TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM C1371-15, *Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers*

ASTM C1549-16, *Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer*

ASTM E1980-11 (Reapproved 2019), *Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces*

ASTM D1005-95 (2020), *Measurement of Dry-Film Thickness of Organic Coatings Using Micrometers* **.**

* ASTM E1980 references ASTM E408 for emissivity testing. The samples tested were determined to be acceptable for the ASTM C1371 test method.

Test Sample Identification:

The Zenova IP > White - Insulating Paint applied on Metal Panels were provided by Zenova Ltd. thru Intertek Testing Services NA Ltd. CAN20 , and tested at the Intertek-B & C, Fresno-Laboratory.

SECTION 4
MATERIAL SOURCE/PREPARATION

Test samples were provided by Zenova Ltd.. Detailed drawings (if any), representative samples of the test specimen, and a copy of this report will be retained by Intertek B&C for a minimum of four years from the test completion date.

The test surface of each specimen was not washed, cleaned, or wiped in any fashioned. Loose dirt, embedded dirt, environmental stains, mold, mildew, and any other material that rested on-or became incorporated into the surface of the material was not altered.

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SECTION 5
EQUIPMENT

Temperature: 75 ºF
Relative Humidity: 30%

ICN/ASSET #	DESCRIPTION	ASSIGNED EMITTANCE	CALIBRATION DATE
SN 159	Reflectance Standard, Model SSR-E		Prior to Testing
Asset # 5738	Thermal Emittance Standard, Model		Prior to Testing

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Jerry Bontilao	Intertek B&C

SECTION 7
TEST PROCEDURE

The test procedure was conducted in accordance with ASTM C 1371, ASTM C 1549, ASTM E1980 and ASTM D1005 test methods.

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SECTION 8
TEST SPECIMEN DESCRIPTION

MANUFACTURER	Zenova Ltd.
PRODUCT TYPE	Coated Metal Panels with Insulation Paint - White
PRODUCT NAME	Zenova IP
UNIT SIZE	4" x 6" (101.6 mm x 152.4 mm)
THICKNESS	N/A
COATING	N/A
TEXTURE	N/A
SURFACE CONTOUR	N/A
OPTICAL PROPERTIES	N /A

SECTION 9
TEST RESULTS

Test Dates: 6/12/2020 and 7/06/2020
Test Start Time: 10:00:00 AM
Test End Time: 1:30:00 PM

Estimated Precision: N/A
Estimated Uncertainty: 3.50%
This was determined using ANSI/NCSL Z540-2-1997 type B evaluation as described in section 4.3 of the specification. For assumptions used for this calculation or for a description of the procedure contact the "Individual-In-Responsible-Charge (IIRC)" that signed this report.

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TEST REPORT FOR ZENOVA LTD.
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Date: 07/28/20
SECTION 9 (CONT'D)

SPECIMEN	ASTM C1371 EMITTANCE	ASTM C1549 REFLECTANCE	ASTM D1005 COAT THICKNESS (Mils)
Insulation Paint-White Panels:			
Panel # 1-2	0.880	0.839	31.65
Panel # 2-2	0.880	0.829	31.13

SPECIMEN	LOW WIND SRI 5 W/m²K	MEDIUM WIND SRI 12 W/m²K	HIGH WIND SRI 30 W/m²K
Insulation Paint-White Panels:			
Panel # 1-2	104	105	105
Panel # 2-2	103	103	103

NOTE: The test data presented above on Reflectance for each panel is an average value from 4) different test surface using ASTM C1549 test method. The average Emittance for each anel using the ASTM C1371 test method has two trials per panel and with a total of (6) missivity measurements. The coating thickness shown above is the average value of the (5)

SECTION 10
CONCLUSION

The test specimen has been submitted by the client for the purpose of calculating the combined test values of reflectivity and emissivity for the Solar Reflectance Index (SRI). The test results does not have a correlation between the client & CRRC and/or Energy Star.

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Fresno, California 93706

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TEST REPORT FOR ZENOVA LTD.
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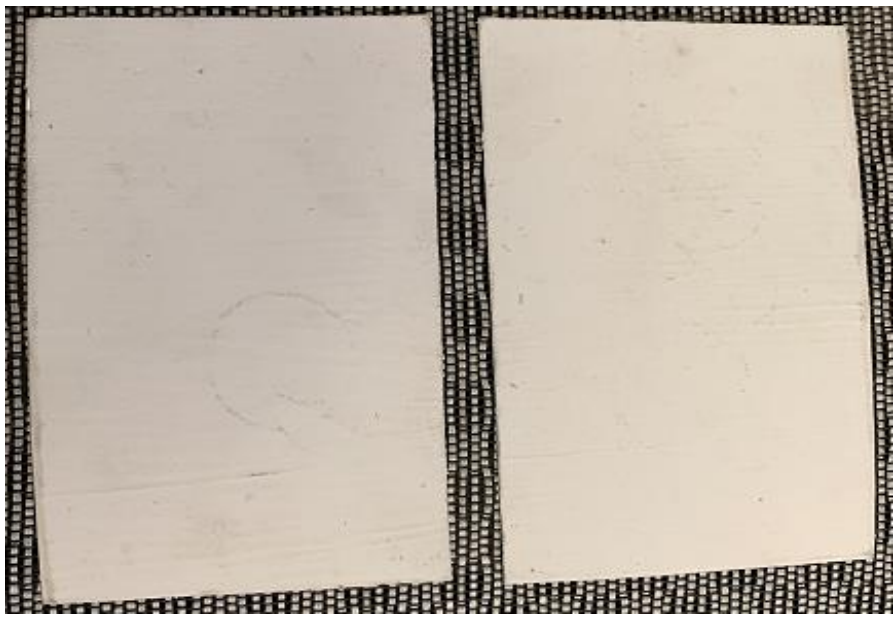
SECTION 11
PHOTOGRAPHS



Insulation Paint - White

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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0.01R0	07/28/20	N/A	Original Report Issue
0.01R1	08/10/20	N/A	Removed Gray panel and added test results for ASTM D1005.