

Cambria County Association for the Blind and Handicapped

LETTER REPORT

SCOPE OF WORK

Xenon Arc Exposure
PVC-Coated Cable Hangers
PVC Plaques

REPORT NUMBER

104660576CRTCRT-001

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July 29, 2021

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LETTER REPORT

July 29, 2021

Intertek Report No. 104660576CRT-001

Intertek Project No. G104660576

Mr. Daron Daly

Ph: 814-472-5077

Cambria County Association for the Blind and Handicapped email: ddaly@cabproducts.com

175 Industrial Park Road

Ebensburg, PA 15931

USA

Subject: Xenon Arc Exposure
PVC-Coated Cable Hangers
PVC Plaques

Dear Daron:

This letter report represents the results of xenon arc exposure of the products above performed in accordance with the following standard:

Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials [ASTM G155:2013]

SECTION 1 SUMMARY

Intertek wishes to inform you we have completed a 1000-hour xenon-arc exposure of PVC-coated cable hangers and PVC plaques in accordance with the standard above. The xenon-arc exposure was performed at Intertek's Plastics Technology Laboratories in Pittsfield, MA. Please refer to the data sheets in Appendix A for additional information regarding the testing. No conclusions regarding compliance have been made; the test results are to be interpreted by Cambria County Association for the Blind and Handicapped.

SECTION 2 NON-CONFORMANCES

Not applicable. The test results are to be interpreted by Cambria County Association for the Blind and Handicapped.

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SECTION 3

CRITICAL COMPONENTS & MATERIALS

Not applicable

SECTION 4

TESTING

Testing as indicated in Table One below has been performed.

Completed Tests:

Xenon Arc Exposure

Pending Tests:

None

Test Description	Standard	Clause(s)	Result	Notes
1000-hour Xenon Arc Exposure	ASTM G155-13	NA	NA	Exposure of PVC-coated plaques and cable hangers Orange PVC identified from SDS as Protech Orange LV (370-2322), Product Code 370CX21249 Cable hanger base material identified by client as 0.187" diameter galvanized steel wire

Table One: Completed Testing

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SECTION 5 PHOTOGRAPHS

Refer to test data sheets in Appendix A.

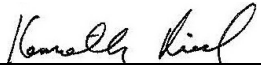

SECTION 6 PROJECT STATUS & ACTION

Issuance of this letter report completes all testing under Intertek project G104660576 as outlined in Quotation Qu-01167121 dated April 13, 2021. Please refer to the test data sheets in Appendix A for additional information regarding the testing.

In responding, please provide a written record of your proposed resolutions numbered in accordance with the items outlined in this letter report. Responding in this way assures that all responses are properly identified.

Once Intertek has received your response to all items outlined in this letter report, a Project Change Order (PCOR) may be issued to cover the scope of work necessary to review these responses.

If there are any questions regarding the information contained in this report, or any of the other services offered by Intertek, please do not hesitate to contact your dedicated Intertek Project Manager.

Completed by:	Kenneth Riedl	Reviewed by:	Chuck Barlow
Title:	Senior Project Engineer	Title:	Engineering Reviewer
Signature:		Signature	
Date	July 29, 2021	Date:	July 29, 2021

Please note: this Letter Report does not represent authorization for the use of any Intertek certification marks.

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APPENDIX A

July 29, 2021

Mr. Daron Daly
Cambria County Association for the Blind and Handicapped
175 Industrial Park Road
Edensburg, PA 15931-4109
USA

Intertek PTL # P20210579

Dear Mr. Daly:

Enclosed you will find the results for the testing you requested.

If you have any questions regarding the data, please do not hesitate to contact me.

Yours sincerely,




Kevin E. Schuman
Quality Manager

KES/nm
Enclosures

Unless inherent in the requested specification or standard, Intertek laboratories apply the "Simple Acceptance" rule, also called "Shared Risk approach" of ILAC-G8:09/2019 guide where the statements of conformity are reported as either: Passed (or in-tolerance) when measured values are within the specified limits, or Failed (or out-of-tolerance) if one or more measured values are outside the specified limits. If the Client requests a statement of conformity other than one inherent in the specification or standard or the "Simple Acceptance" rule, the decision rule shall be clearly defined by the Client, communicated to Intertek, and agreed by all related parties.



Testing	: Standard Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications			
Test Method	: ASTM D2565-16, ASTM G155-13			
Project Number	: P20210579			
Customer	: Cambria County Association for the Blind and Handicapped			
Attention	: Daron Daly			
Operator	: D. Loehr			
Date	: July 26, 2021			
Instrument	: Atlas Model Ci4000 Xenon Arc Weather-Ometer® S/N 15733	Calibrated: 5/26/21		
Inner Filter Type and Age at Start	: 72	hours	Inner Filter Changed : Y	
Outer Filter Type and Age at Start	: 1018	hours	Outer Filter Changed : Y	
Irradiance at 340 nm	: 0.55 W/m ²			
Temperature Control	: Black Panel Sensor			
Water Source	: RO/DI			
Control Material	: Clear Polystyrene Lightfastness Standard			
Control Material Replacement	: Weekly			
Specimen Repositioning Cycle	: None necessary			
TEST CYCLE	Continuous Light at 70°C / 50%Relative Humidity			
Date and Time samples removed	: 7/26/21 9:00AM			

Material	Exposure Time (machine hrs)	Radiant Exposure at 340 nm (kJ/m2)
(12) PVC Hangers & (12) Plaques	1001	1978
4 Hangers- 6mil		
4 Hangers- 7mil		
4 Hangers- 8mil		
4 Plaques-6mil		
4 Plaques-7mil		
4 Plaques-8mil		

Note: The plaques were exposed on the shiny side

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
Job #:	G104660576	Tested by:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
		Pre-Review:	Chuck Barlow <i>CB</i>	Date:	5/18/2021
Quote #:	Qu-01167121	Reviewer:	Chuck Barlow <i>CB</i>	Date:	7/29/2021
Product:	PVC-Coated Cable Hangers and PVC Plaques	Sample Condition:	Production	Control Number:	CRT2105041059-001
Standard:	ASTM G155-13 Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials				

Test Result Summary

Test Description	Date Completed	Pass /Fail
1000-hour Xenon Arc Exposure for (12) hangers and (12) Plaques, with 60, 70 and 80 mil PVC coating thickness	7/26/2021	NA
Post-exposure visual check (cracking, fading)	7/29/2021	NA

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
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Test Equipment Used

Item	Equipment Type	Equipment #	Cal. Due Date
1	Temperature/Humidity Indicator	T1393	9/1/2021
2	Refer to Intertek Pittsfield data sheets for additional test equipment used.		

Sample Identification





Item	Description	No. Rec'd
A	PVC Coated Steel Hangers, Coating thicknesses of 60, 70, and 80 mils, base material 0.187" diameter galvanized steel wire	(16) Total
B	PVC Plaques, approximately 6"x6", thicknesses of 60, 70, and 80 mils	(12) Total

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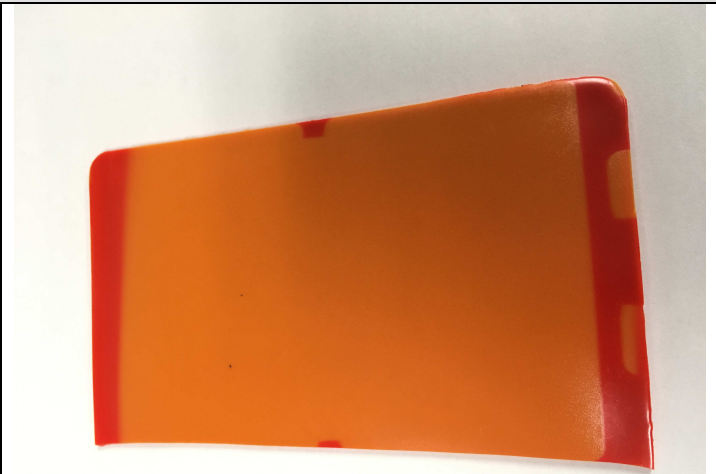
Sample Identification

Item	Photos (As received 60 mil specimens, others similar)	
A	 	
B		

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Item	Photos (After 1000-hour UV Exposure)	
A (60 mil coated hanger, plaque)		
B (70 mil coated hanger, plaque)		

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
Job #:	G104660576	Tested by:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
		Pre-Review:	Chuck Barlow <i>CB</i>	Date:	5/18/2021
Quote #:	Qu-01167121	Reviewer:	Chuck Barlow <i>CB</i>	Date:	7/29/2021
Product:	PVC-Coated Cable Hangers and PVC Plaques	Sample Condition:	Production	Control Number:	CRT2105041059-001
Standard:	ASTM G155-13 Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials				

Item	Photos (After 1000-hour UV Exposure)	
C (80 mil coated hanger, plaque)		

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
Job #:	G104660576	Tested by:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
		Pre-Review:	Chuck Barlow <i>CB</i>	Date:	5/18/2021
Quote #:	Qu-01167121	Reviewer:	Chuck Barlow <i>CB</i>	Date:	7/29/2021
Product:	PVC-Coated Cable Hangers and PVC Plaques	Sample Condition:	Production	Control Number:	CRT2105041059-001
Standard:	ASTM G155-13 Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials				

1000 Hour Accelerated Weathering

Test Parameters:	
Conditioning:	Xenon Arc, Continuous Light at 0.55W/(m ² •nm) Borosilicate Glass Filters Black Panel Temperature of 70°C
Exposure Duration:	1000 Hours
Number of Test Specimens:	(4) PVC Coated Steel Hangers, 60 mil coating (0.187" diameter galvanized steel wire) (4) PVC Coated Steel Hangers, 70 mil coating (0.187" diameter galvanized steel wire) (4) PVC Coated Steel Hangers, 80 mil coating (0.187" diameter galvanized steel wire) (4) PVC Plaques, 60 mils (4) PVC Plaques, 70 mils (4) PVC Plaques, 80 mils
Note:	Xenon arc exposure performed at Intertek Pittsfield: May 26 – July 26, 2021

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
Job #:	G104660576	Tested by:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
		Pre-Review:	Chuck Barlow <i>CB</i>	Date:	5/18/2021
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Product:	PVC-Coated Cable Hangers and PVC Plaques	Sample Condition:	Production	Control Number:	CRT2105041059-001
Standard:	ASTM G155-13 Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials				

Results:					
Sample	Specimen	Cracking of Coating After UV Exposure (Y/N)?	Fading of Coating After UV Exposure (Y/N)?	Comments	Pass/Fail
60 Mil Coated Hanger	One	N	Y (slight)	Gloss reduction, tackiness	NA
	Two	N	Y (slight)	Gloss reduction, tackiness	NA
	Three	N	Y (slight)	Gloss reduction, tackiness	NA
	Four	N	Y (slight)	Gloss reduction, tackiness	NA
	Five	N	Y (slight)	Gloss reduction, tackiness	NA
60 Mil Plaque	One	N	Y	Warping, residue on exposed surface	NA
	Two	N	Y	Warping, residue on exposed surface	NA
	Three	N	Y	Warping, residue on exposed surface	NA
	Four	N	Y	Warping, residue on exposed surface	NA
70 Mil Coated Hanger	One	N	Y (slight)	Gloss reduction, tackiness	NA
	Two	N	Y (slight)	Gloss reduction, tackiness	NA
	Three	N	Y (slight)	Gloss reduction, tackiness	NA
	Four	N	Y (slight)	Gloss reduction, tackiness	NA

Client:	Cambria County Association for the Blind and Handicapped (CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>	Date:	7/29/2021
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Results: Continued					
Sample	Specimen	Cracking of Coating After UV Exposure (Y/N)?	Fading of Coating After UV Exposure (Y/N)?	Comments	Pass/Fail
70 Mil Plaque	One	N	Y	Warping, residue on exposed surface	NA
	Two	N	Y	Warping, residue on exposed surface	NA
	Three	N	Y	Blister, warping, residue on exposed surface	NA
	Four	N	Y	Warping, residue on exposed surface	NA
80 Mil Coated Hanger	One	N	Y (slight)	Slight gloss reduction, slight tackiness	NA
	Two	N	Y (slight)	Slight gloss reduction, slight tackiness	NA
	Three	N	Y (slight)	Slight gloss reduction, slight tackiness	NA
80 Mil Plaque	One	N	Y	Residue on exposed surface	NA
	Two	N	Y	Residue on exposed surface	NA
	Three	N	Y	Residue on exposed surface	NA
	Four	N	Y	Residue on exposed surface	NA

	Cambria County Association for the Blind and Handicapped					
Client:	(CAB Products)	Engineer:	Kenneth Riedl <i>KR</i>		Date:	7/29/2021
Job #:	G104660576	Tested by:	Kenneth Riedl <i>KR</i>		Date:	7/29/2021
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Requirements

There are no requirements. Report the appearance of the hangers and plaques after 1000 hours of xenon-arc exposure.

Intertek Comments:

NA (Pass) The product complies with all applicable requirements of this test.

NA (Fail) The product does not comply with the requirements of this test.

Test Date: 7/29/2021 **Tested By:** Kenneth Riedl *KR*

Environmental Conditions During Testing:

Humidity: 66.1% RH

Ambient: 20.9°C

Equipment Used (See page 3 for details):

[illegible]