



File R18970
Project 4789531869

Issued: July 1, 2020

REPORT

On

METAL ROOF DECK PANELS (TJPV)
ROOFING SYSTEMS (TGFU)
ROOF-COVERING MATERIALS, IMPACT RESISTANCE (TGAM)
ROOFING SYSTEMS, UPLIFT RESISTANCE (TGIK)

Under The

CLASSIFICATION PROGRAM

Englert Inc.
Perth Amboy, NJ

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PRODUCTS COVERED:

The subject of this Report is the metal roof deck panel(s) designated "Series 2000", "Series 2500", "Series 1100", "Series 1300", "Series 1120", "Series 1500", and "Series 1000".

The products in this Report are Classified for use in roofing systems as to external fire exposure, impact resistance, and uplift resistance.

USE:

The products are intended for use as building material as permitted by authorities having jurisdiction.

TEST RECORD NO. 1

STUDY FOR CLASSIFICATION PURPOSES:

For the results of previous evaluations and tests conducted on samples and test assemblies including the products covered by this Report, refer to the various independent reports and letter reports under File R18970.

TEST RECORD NO. 2

GENERAL:

The results relate only to the items evaluated under this Test Record.

INVESTIGATION:

The scope of the investigation sponsored under Project No. 4789531869 was to provide a basis on which to establish the use a field roll former as an alternate manufacturing method for the metal roof deck panels designated "Series 2000", "Series 2500", "Series 1100", "Series 1300", "Series 1300" (TCSII), "Series 1120", "Series 1500", and "Series 1000".

The panels are currently Certified under the following UL LLC (UL) product categories as shown:

- ☐ Metal Roof Deck Panels (TJPV): Series 2000, 2500, 1100, 1300, 1500, and 1000
- ☐ Roofing Systems (TGFU): Series 2000, 2500, 1100, 1300, Series 1300 (TCSII), 1120, 1500, and 1000
- ☐ Roof-Covering Materials, Impact Resistance (TGAM): Series 2000, 2500, 1100, 1300, 1120, 1500, and 1000
- ☐ Roofing Systems, Uplift Resistance (TGIK): Series 1300 (TCSII), 1120, and 1500

STUDY FOR CERTIFICATION:

ANSI/UL 580 and ANSI/UL 1897 wind uplift testing, ANSI/UL 790 fire testing, and ANSI/UL 2218A impact testing of the panels submitted for investigation was not considered necessary as the base metal specifications and panel profiles of the panels, and the constructions that the panels are installed in, are not changing.

CERTIFICATION:

The following represents the judgment of UL based upon the results of the examination and data analysis presented in this Test Record, as they relate to established principles and previously recorded data.

Under the Follow-Up Service program of UL, the manufacturer is authorized to apply UL's Classification Mark on such products, which comply with the Follow-Up Service Procedure and any other applicable requirements of UL. Only those products, that properly bear UL's Classification Mark, are considered to be Classified by UL.

No revisions to UL's Product iQ™ database for the Classifications published for Englert Inc. under the product categories of Metal Roof Deck Panels (TJPV); Roofing Systems (TGfU); Roofing Systems, Uplift Resistance (TGik); or Roofing Systems, Impact Resistance (TGAM) are necessary.

TEST RECORD SUMMARY NO. 2:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of the standards listed below, and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

<u>Standard</u>	<u>Title</u>	<u>Edition or Publication Date</u>	<u>Latest Revision Date</u>
ANSI/UL 580	Standard for Tests for Uplift Resistance of Roof Assemblies	5 th	March 29, 2019
ANSI/UL 790	Standard Test Methods for Fire Tests of Roof Coverings	8 th	October 19, 2018
ANSI/UL 2218A	Standard for Impact Resistance of Roofing Systems	1 st	August 2, 2019
ANSI/UL 1897	Uplift Tests for Roof Covering Systems	7 th	September 23, 2015

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Test Record No.2 By:



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Reviewed by:



STEVE CUCULICH
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MARTIN K. ROWAN
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TEST RECORD NO. 3

GENERAL:

The results relate only to the items evaluated under this Test Record.

INVESTIGATION:

The scope of the investigation sponsored under Project No. 4789588639 was to provide a basis on which to establish Follow-Up Service and Classification of the metal roof deck panels designated "Series 2000" and "Series 1300" formed from minimum 0.032 inch thick aluminum. These panels were classified under UL's product categories of Roofing Systems (TGFU) and Roof-Covering Materials, Impact Resistance (TGAM) in accordance with UL 790 and UL 2218A, respectively. Three roofing systems were also revised to allow the use of steel panels.

STUDY FOR CERTIFICATION:

UL 790 fire testing and UL 2218A impact testing of the panels submitted for investigation was not considered necessary based upon information documented internally in Test Reference No. 2 in combination with UL's general test experience and a review of UL's Product iQ™ Database for Certifications published under the product categories Roofing Systems (TGFU) and Roof-covering Materials, Impact Resistance (TGAM).

CERTIFICATION:

The following represents the judgment of UL based upon the results of the examination and data analysis presented in this Test Record, as they relate to established principles and previously recorded data.

Under the Follow-Up Service program of UL, the manufacturer is authorized to apply UL's Classification Mark on such products, which comply with the Follow-Up Service Procedure and any other applicable requirements of UL. Only those products, that properly bear UL's Classification Mark, are considered to be Classified by UL.

Revisions to UL's Online Directory for the Certifications published for Englert Inc under the product category Roofing Systems (TGFU) were made to include the aluminum and steel panels as indicated below (revisions in italics):

Roofing Systems

OTHER SYSTEMS

Class A

4. Deck: C-15/32

Incline: Unlimited

Underlayment: — Two or more plies GAF "VersaShield® Fire-Resistant Roof Deck Protection" or GAF "VersaShield® Underlayment" mechanically fastened.

Panels: — *Steel or aluminum roofing panels, designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300(TCSII)", "Series 1500", "Series 2000" or "Series 2500" mechanically fastened.*

5. Deck: C-15/32

Incline: Unlimited

Underlayment: – One or more plies GAF "VersaShield® Solo™ Fire Resistant Slip Sheet", mechanically fastened.

Panels: – *Steel or aluminum roofing panels, designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300 (TCSII)", "Series 1500", "Series 2000" or "Series 2500" mechanically fastened.*

Class B

1. Deck: C-15/32

Incline: Unlimited

Underlayment: – One or more plies GAF "VersaShield® Fire-Resistant Roof Deck Protection" or GAF "VersaShield® Underlayment", mechanically fastened.

Panels: – *Steel or aluminum roofing panels, designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300 (TCSII)", "Series 1500", "Series 2000" or "Series 2500" mechanically fastened.*

Revisions to UL's Online Directory for the Certifications published for Englert Inc under the product category Roof-Covering Materials, Impact Resistance (TGAM) were made to include the aluminum panels as indicated below (revisions in italics):

Roof-covering Materials, Impact Resistance

Class 4 formed aluminum panels, Model(s) Series 1300 (Report Date: 2000-06-30), Series 2000 (Report Date: 1999-09-13)

CERTIFICATION MARK

The following Certification Marking may be applied to the aluminum "Series 1300" and "Series 2000" metal roof deck panels covered by this Test Record as illustrated below:

Roofing Systems (TGFM):



BUILDING UNITS FOR ROOFING SYSTEMS
AS TO EXTERNAL FIRE EXPOSURE
(Control No.)

Roofing Systems (TGAM):



BUILDING UNITS FOR ROOFING SYSTEMS
AS TO IMPACT RESISTANCE
(Control No.)

TEST RECORD SUMMARY NO. 3:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of the standards listed below, and therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

<u>Standard</u>	<u>Title</u>	<u>Edition or Publication Date</u>	<u>Latest Revision Date</u>
UL 790	Standard Test Methods for Fire Tests of Roof Coverings	8 th	October 19, 2018
UL 2218A	Standard for Impact Resistance of Roofing Systems	1 st	August 2, 2019

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TEST RECORD NO. 4

GENERAL:

The results relate only to the items evaluated under this Test Record.

INVESTIGATION:

The scope of the investigation sponsored under Project No. 4790894903 was to establish Certification of new roofing systems surfaced with metal panels under UL's product category of Roofing Systems (TGFU).

The following tests were waived as a part of this investigation:

Test	Rationale for Waived Test (See Below)
UL 790 Class A fire tests	1
1. Testing was not considered necessary based on the results of previous investigations.	

CERTIFICATION:

Revisions to UL's Product iQ™ database for the Certifications published for Englert Inc. under the product category Roofing Systems (TGFU) were made to include the following new systems:

OTHER SYSTEMS
Class A

6. Deck: NC

Incline: Unlimited

Insulation: - Any UL Classified polyisocyanurate, any thickness.

Base Sheet: - One ply "Polystick MTS", "Polystick MTS Plus", "Polystick MU-X", "Polystick XFR", "Polystick® IR-Xe", or "PolyVap SA G" self-adhered or "Elastobase V" or "PolyAnchor UDL 40" mechanically fastened.

Panels: - Steel roofing panels designated "Series 2000", "Series 2400", "Series 2500", "Series 1100", "Series 1300", "Series 1300" (TCSII), "Series 1120", "Series 1500", "Series 1000", "Series 1301", or "Metalman 900HS", 26 gauge minimum or copper roofing panels designated "Series 1300", mechanically fastened.

7. Deck: C-15/32 or
spaced sheathing

Incline: Unlimited Impact: 4

Underlayment: - One ply "Polystick XFR" self-adhered.

Insulation (Optional): - Any UL Classified polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness mechanically fastened or adhered with any UL Classified insulation adhesive.

Panels: - Steel roofing panels designated "Series 2000", "Series 2400", "Series 2500", "Series 1100", "Series 1300", "Series 1300" (TCSII), "Series 1120", "Series 1500", "Series 1000", "Series 1301", or "Metalman 900HS", 26 gauge minimum or copper roofing panels designated "Series 1300", mechanically fastened.

8. Deck: C-15/32 or spaced
sheathing

Incline: Unlimited

Base Sheet (Optional): – Minimum one ply Type 15 or Type 30 asphalt saturated felt or Type G1 or Type G2 asphalt saturated glass mat or "Elastobase V" or "PolyAnchor UDL 40" mechanically fastened or "Polystick MTS", "Polystick MTS Plus", "Polystick MU-X", "Polystick® IR-Xe", or "PolyVap SA G" self-adhered.

Underlayment: – Two plies "Polystick XFR" self-adhered.

Insulation (Optional): – Any UL Classified polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness mechanically fastened or adhered with any UL Classified insulation adhesive.

Panels: – Aluminum roofing panels designated "Series 2000", "Series 1100", "Series 1300", "Series 1120", "Series 1301", or "Metalman 900HS", minimum 0.032 inches thick, mechanically fastened.

TEST RECORD SUMMARY:

The following represents the judgment of UL based upon the results of the examination and data analysis presented in this Test Record, as they relate to established principles and previously recorded data.

The results of this investigation, including construction review, indicate that the products evaluated comply with the applicable requirements of the standards listed below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

<u>Standard</u>	<u>Title</u>	<u>Edition or Publication Date</u>	<u>Latest Revision Date</u>
UL 790	Standard Test Methods for Fire Tests of Roof Coverings	9 th	February 18, 2022

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TEST RECORD NO. 5

GENERAL:

The results relate only to the items evaluated under this Test Record.

INVESTIGATION:

The scope of the investigation sponsored under Project No. 4790968181 was to establish Certification of the "Series 2400", "Series 2500" and "Series 1500" metal roof deck panels formed from minimum 0.032 inch thick aluminum.

The finished products are to be Classified under the product categories of Roofing Systems (TGFU), and Roof Covering Materials, Impact Resistance (TGAM). The finished products formed from minimum 24 gauge steel are currently Classified under the product categories of Metal Roof Deck Panels (TJPV), Roofing Systems (TGFU), and Roof Covering Materials, Impact Resistance (TGAM), and ("Series 1500" only) Roofing Systems, Uplift Resistance (TGIK).

The following tests were waived as a part of this investigation:

Test	Rationale for Waived Test (See Below)
UL 790 Class A fire tests	1
UL 2218A Class 4 impact tests	1
1. Testing was not considered necessary based on the results of previous investigations.	

CERTIFICATION:

Revisions to UL's Product iQ™ database for the Certifications published for Englert Inc. under the product category Roof Covering Materials, Impact Resistance (TGAM) were made to include the following new panel materials:

Class 4 formed aluminum panels Model(s) Metalman 900HS, Series 1100, Series 1300, Series 1301, Series 2000, Series 2400, Series 2500, Series 1500

Revisions to UL's Product iQ™ database for the Certifications published for Englert Inc. under the product category Roofing Systems (TGFU) were made to include the following new panel materials:

OTHER SYSTEMS

Class A

4. Deck: C-15/32 Incline: Unlimited
Underlayment: – Two or more plies GAF "VersaShield® Fire-Resistant Roof Deck Protection" or GAF "VersaShield® Underlayment" mechanically fastened.
Panels: – Steel roofing panels designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300(TCSII)", "Series 1500", "Series 2000", "Series 2400", "Series 2500", "Series 1301" or "Metalman 900HS", or aluminum roofing panels designated "Series 2000", "Series 1100", "Series 1300", "Series 1120", "Series 1301", "Metalman 900HS", "Series 1500", "Series 2400", or "Series 2500", minimum 0.032 inches thick, mechanically fastened.
5. Deck: C-15/32 Incline: Unlimited
Underlayment: – One or more plies GAF "VersaShield® Solo™ Fire Resistant Slip Sheet", mechanically fastened.
Panels: – Steel roofing panels designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300(TCSII)", "Series 1500", "Series 2000", "Series 2400", "Series 2500", "Series 1301" or "Metalman 900HS", or aluminum roofing panels designated "Series 2000", "Series 1100", "Series 1300", "Series 1120", "Series 1301", "Metalman 900HS", "Series 1500", "Series 2400", or "Series 2500", minimum 0.032 inches thick, mechanically fastened.
8. Deck: C-15/32 or spaced Incline: Unlimited
sheathing
Base Sheet (Optional): – Minimum one ply Type 15 or Type 30 asphalt saturated felt or Type G1 or Type G2 asphalt saturated glass mat or "Elastobase V" or "PolyAnchor UDL 40" mechanically fastened or "Polystick MTS", "Polystick MTS Plus", "Polystick MU-X", "Polystick® IR-Xe", or "PolyVap SA G" self-adhered.
Underlayment: – Two plies "Polystick XFR" self-adhered.
Insulation (Optional): – Any UL Classified polyisocyanurate, perlite, wood fiber or polyisocyanurate/perlite board, any thickness mechanically fastened or adhered with any UL Classified insulation adhesive.
Panels: – Aluminum roofing panels designated "Series 2000", "Series 1100", "Series 1300", "Series 1120", "Series 1301", "Metalman 900HS", "Series 1500", "Series 2400", or "Series 2500", minimum 0.032 inches thick, mechanically fastened.

Class B

1. Deck: C-15/32

Incline: Unlimited

Underlayment: – One or more plies GAF "VersaShield® Fire-Resistant Roof Deck Protection" or GAF "VersaShield® Underlayment", mechanically fastened.

Panels: – Steel roofing panels designated "Series 1000", "Series 1100", "Series 1120", "Series 1300", "Series 1300(TCSII)", "Series 1500", "Series 2000", "Series 2400", "Series 2500", "Series 1301" or "Metalman 900HS", or aluminum roofing panels designated "Series 2000", "Series 1100", "Series 1300", "Series 1120", "Series 1301", "Metalman 900HS", "Series 1500", "Series 2400", or "Series 2500", minimum 0.032 inches thick, mechanically fastened.

TEST RECORD SUMMARY:

The following represents the judgment of UL based upon the results of the examination and data analysis presented in this Test Record, as they relate to established principles and previously recorded data.

The results of this investigation, including construction review, indicate that the products evaluated comply with the applicable requirements of the standards listed below and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

<u>Standard</u>	<u>Title</u>	<u>Edition or Publication Date</u>	<u>Latest Revision Date</u>
UL 790	Standard Test Methods for Fire Tests of Roof Coverings	9 th	February 18, 2022
UL 2218A	Standard for Impact Resistance of Roofing Systems	1 st	August 2, 2019

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CONCLUSION:

Samples of the products covered by this Report have been found to comply with the requirements covering the category, and the products are found to comply with UL's applicable requirements. The description and/or test results in this Report are only applicable to the samples investigated by UL and does not signify the products described as being covered under UL's Follow-Up Service Program. When covered under UL's Follow-Up Service Program, the manufacturer is authorized to use the UL Classification Mark on such products which comply with UL's Follow-Up Service Procedure and any other application requirements of UL LLC. The Classification Mark of UL on the product, or the UL symbol on the product and the Classification Mark on the smallest unit container in which the product is packaged, is the only method to identify products investigated by UL to published requirements and manufactured under UL's Classification and Follow-Up Service.

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