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Please find attached the related material on Project 4790066128

For your convenience, the below describes the related updates:

For Revised/New documentation please reference 2021-09-21 in the page headings. New Sections 1.2,1.3,1.4,1.5, New Report issued date 2021-09-21 created.

R38920-20210921-Report-Independent
R38920-vol1-Index
R38920-vol1-Appendix
R38920-vol1-SectionGeneral
R38920-20210921-CertificateofCompliance

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File R38920
Project 4790066128

Issued: September 21, 2021

REPORT

On

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

Under The

CLASSIFICATION PROGRAM

Delta Metals LLC
Leon, IA

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PRODUCTS COVERED:

The subject of this Report is the metal roof deck panel(s) designated "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel".

The product in this Report is 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

GENERAL:

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

INVESTIGATION:

The scope of the investigation sponsored under Project No. 4790066128 was to provide a basis on which to establish Follow-Up Service and Classification of the metal roof deck panels designated "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" under UL's product categories of Metal Roof Deck Panels (TJPV), Roofing Systems (TGFU), and Roof-Covering Materials, Impact Resistance (TGAM) in accordance with UL 580, UL 790, and UL 2218.

STUDY FOR CERTIFICATION:

ANSI/UL 580 wind uplift testing, ANSI/UL 790 fire testing, and ANSI/UL 2218A impact testing of the products submitted for investigation was not considered necessary based upon UL's general test experience and a review of UL's Product iQ™ Database for Certifications published under the product categories Metal Roof Deck Panels (TJPV), 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.

"7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" finished products covered by this Test Record are judged eligible for Follow-up Service and subsequent Certification.

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 Product iQ™ database for the Certifications published for Delta Metals LLC under the product category Metal Roof Deck Panels (TJPV) were made to include the new panels as indicated below:

Metal Roof Deck Panels

Coated Steel panels identified as "7/8 Corrugated" for use in Construction No. 649.

Coated Steel panels identified as "Snap-Lock 1.5" for use in Construction No. 529.

Coated Steel panels identified as "Fastener Flange 1" for use in Construction No. 589.

Revisions to UL's Product iQ™ database for the Certifications published for Delta Metals LLC under the product category Roofing Systems (TGFU) were made to include the new panels as indicated below (revisions in italics):

Roofing Systems

OTHER SYSTEMS Class A

One or more layers of GAF Corp. "VersaShield Underlayment", mechanically fastened, may be used in lieu of the Barrier Board in all combustible Classifications with steel panels.

1. Deck: C-15/32 Incline: Unlimited Impact: Class 4
Barrier Board: — 1/4 in. min. G-P Gypsum DensDeck® or 1/4 in. min United States Gypsum Co. SECUROCK® Glass-Mat Roof Board (Type SGMRX), National Gypsum "DEXcell Glass Mat Roof Board" or "DEXcell FV Glass Mat Roof Board" with all joints staggered a min of 6 in. from the plywood joints.
Ply Sheet (Optional): — Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: — Coated Steel roofing panels designated "Delta Max Rib", "*7/8" Corrugated*", "*Snap-Lock 1.5*", "*Fastener Flange 1*", and "*Legacy Panel*" mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

2. Deck: NC Incline: Unlimited Impact: Class 4
Barrier Board: – 7/16 OSB or 5/8 in. plywood over polyisocyanurate insulation board or polyisocyanurate composite board, any thickness.
Ply Sheet (Optional): – Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: – Coated Steel roofing panels designated "Delta Max Rib", "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.
3. Deck: NC Incline: Unlimited Impact: Class 4
Insulation: – Polyisocyanurate, glass fiber, perlite or wood fiber, any thickness.
Ply Sheet (Optional): – Any UL Classified Type G1, G2 or G3 base/ply sheet, Type 15, 20 or 30 felt or UL Classified prepared roofing accessory or WR Grace "Ice and Water Shield".
Surfacing: – Coated Steel roofing panels designated "Delta Max Rib", "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.
4. Deck: NC Incline: Unlimited Impact: Class 4
Insulation: – None required, however any UL Classified insulations may be used over open purlin spans. Any combination and any total thickness of insulation may be used.
Surfacing: – Coated Steel roofing panels designated "Delta Max Rib", "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Class C

1. Deck: C-15/32 Incline: Unlimited Impact: Class 4
Surfacing: – Coated Steel roofing panels designated "Delta Max Rib", "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" mechanically fastened or with steel screws when roof deck fasteners (panel clips) not required.

Revisions to UL's Product iQ™ database for the Certifications published for Delta Metals LLC under the product category Roof-Covering Materials, Impact Resistance (TGAM) were made to include the new panels as indicated below:

Roof-covering Materials, Impact Resistance

Class 4 formed steel roof panels, Model(s) Delta Max Rib, *7/8" Corrugated*, *Legacy Panel*, *Snap-Lock 1.5*, *Fastener Flange 1*, *Legacy Panel*

CERTIFICATION MARK

The following Certification Marking may be applied to the "7/8" Corrugated", "Snap-Lock 1.5", "Fastener Flange 1", and "Legacy Panel" finished products covered by this Test Record as illustrated below:

Roofing Systems (TGFU):



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

Roofing Systems (TGAM):



ALSO CERTIFIED AS TO IMPACT RESISTANCE
CLASS 4
(Control No.)

Metal Roof Deck Panels (TJPV):

"7/8 Corrugated"



METAL ROOF DECK PANELS
AS TO UPLIFT RESISTANCE
Class 90
AS SHOWN BY CONSTRUCTION NO. 649

"Snap-Lock 1.5"



METAL ROOF DECK PANELS
AS TO UPLIFT RESISTANCE
Class 90
AS SHOWN BY CONSTRUCTION NO. 529

"Fastener Flange 1"



METAL ROOF DECK PANELS
AS TO UPLIFT RESISTANCE
Class 90
AS SHOWN BY CONSTRUCTION NO. 589

TEST RECORD SUMMARY NO. 1:

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 2218	Impact Resistance of Prepared Roof Covering Materials	2 nd	August 10, 2020

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Test Record No.1 By:



AILEEN DOBERSZTYN

Engineer

Building Materials & Systems

Reviewed by:



ALPESH PATEL

Staff Engineer

Building Materials & Systems

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.

This Report is intended solely for the use of UL LLC (UL) and the Applicant for establishment of UL Certification coverage of the described product(s) under UL's Follow-Up Service. UL retains all rights, title and interest (including exclusive ownership) in this Report and all copyright therein. The Applicant or its designated agent shall not disclose or otherwise distribute this Report or its contents to any third party, except as required for purposes of compliance with laws, regulations, or other existing agreements or schemes in which UL is currently a participant. Any other use of this Report including, without limitation, evaluation or certification by a party other than UL is prohibited and renders this Report null and void. UL shall not incur any obligation or liability for any loss, expense, or punitive damages, arising out of, or in connection with, the use or reliance upon the contents of this Report to anyone other than the Applicant as provided in the agreement between UL and the Applicant. Any use or reference to UL's name or Certification mark(s) by anyone other than the Applicant in accordance with the agreement is prohibited without the express written approval of UL. Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. UL shall not otherwise be responsible to anyone for the use of or reliance upon the contents of this Report.

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Report By:



AILEEN DOBERSZTYN

Engineer

Building Materials & Systems

Reviewed by:



ALPESH PATEL

Staff Engineer

Building Materials & Systems

<u>Models</u>	<u>Section</u>	<u>Independent Report Date</u> ⁺
"Delta Max Rib"	1	2016-11-29
"7/8 Corrugated"	2	2021-09-21
"Snap-Lock 1.5"	3	2021-09-21
"Fastener Flange 1"	4	2021-09-21
"Legacy Panel"	5	2021-09-21

+ Independent Report Date is the issue date of the Report-Independent file on ECM for the product(s) indicated. An "N/A" signifies that the Report-Independent file has not yet been determined or established. When the Report-Independent is determined or established, the project handler will delete "N/A" and insert the issue date. No other dates or information are to be entered in this column, such as DescriptionIP issue dates, project numbers and the like.

SPECIAL INSTRUCTIONS

FIELD REPRESENTATIVE:

This Follow-Up Service Procedure covers the Classification of metal roof deck panels. The panels are produced by portable rolling machines either in plant (factory-formed) or at job sites (field-formed). When the machines produce panels at job sites, the machines are covered by a Certificate Service.

CERTIFICATES AND PANEL DRAWING

A requirement for the field-formed type of Classification is that each portable metal roof deck panel roll forming machine has an Underwriters Laboratories Inc. Certificate with it.

A basic Certificate is issued by Underwriters Laboratories, which is used as a "Master" by the Classified Company to produce all Certificates.

The Certificate must be protected from the weather. Each Certificate has a six month expiration date. Two copies of each Certificate are produced by the Classified Company. The original stays with the machine, one copy is kept by the Classified Company with their records for the machine, and one copy is put in the company's copy of this Procedure.

The latest Certificate is shown in each individual section.

The expired Certificates are to be kept a minimum of five years.

A copy of the detailed roof deck panel drawing is to be included with the original of the Certificate that stays with the machine.

RECORDS

Records are to be kept by the Classified Company for each panel produced at job sites. The records must include machine model number, machine serial number, metal panel designation, job site name, city and state.

INSPECTION

During each regular inspection, the field representative shall do the following:

1. Inspect the strength records of the manufacturer of the metal to be used in the manufacture of roof deck panels and determine that the yield strength is within limits specified in the Procedure.

If the records show the strength to be below that required, the entire lot of metal shall not be used to produce UL Classified panels.

2. FOR FACTORY-FORMED PANELS - After determining that the yield strength is acceptable, the field representative shall select five samples from the current production or Classified stock and check the configuration to see that they conform to the dimensions shown in the appropriate section illustrations. A template may be used to conduct the dimensional examination.
- 2A. FOR FIELD-FORMED PANELS - After determining that the yield strength is acceptable, the field representative shall watch a section of panel being produced from each machine requiring a new Certificate (once each six month period) and check the configuration to see that it conforms to the dimensions shown in the appropriate section illustrations. A template may be used to conduct the dimensional examination.

NOTE: All panel illustration dimensions have a ± 5 percent tolerance unless otherwise indicated.

FOR FACTORY-FORMED PANELS

If any one sample is found to be not in compliance with the required dimensions, a second set of five panels (shingles) shall be selected and examined in the same way as the first set.

If any one sample of the second set is found to be not in compliance with appropriate illustrations, the entire lot shall be rejected. The manufacturer may then make a careful review of the entire lot and resubmit any portion for reexamination and relabeling.

FOR FIELD-FORMED PANELS

If the sample is found to be not in compliance with the required dimensions, a set of five additional panel sections shall be produced and examined in the same way as the first panel.

If any one sample of the second set is found to be not in compliance with the appropriate illustrations, the machine is not eligible for a new Certificate. The machine may be adjusted and another piece of panel produced and examined for compliance with the required dimensions. If this sample is in compliance, the machine is eligible for a new Certificate.

NOTE: THE STRENGTH OF THE METAL SHALL BE VERIFIED BY EITHER:

1. "Mill Test Reports," which should accompany each coil of metal, with either coil identification number on a tag or written on the coil.
2. Yield Strength Test Reports conducted on samples of the metal from the coil.
3. Suppliers'invoices or delivery tickets confirming the delivery of the required metal. These should state one or more of the following metal properties; SAE number, yield strength or ASTM Grade designation, thickness and Rockwell (or other) hardness as indicated in the Description sections.

RESERVED

RESERVED

RESERVED

GENERAL

PRODUCT COVERED:

Metal roof deck panels.

CERTIFICATION INFORMATION:

The finished material complying with all the specifications set forth in the Descriptive Sections is eligible to bear the Markings shown in the Classification Marking Data Pages in the front of this Procedure Volume.

<u>Product Designation</u>	<u>Section</u>	UPLIFT (TJPV)	EXTERNAL FIRE EXPOSURE (TGFU)	IMPACT (TGAM)
"Delta Max Rib"	1	X	X	X
"7/8 Corrugated"	2	X	X	X
"Snap-Lock 1.5"	3	X	X	X
"Fastener Flange 1"	4	X	X	X
"Legacy Panel"	5	-	X	X

The following information shall be included on all Classification Markings pertaining to products described in all sections:

1. Classification Marking Data Page For TJPV:

MATERIAL DESIGNATION: Metal Roof Deck Panels

See individual procedure sections for specific uplift constructions

2. Classification Marking Data Page For TGFU:

MATERIAL DESIGNATION: Building Units

See UL Roofing Material and System Directory

3. Classification Marking Data Page For TGAM:

The following statement may also be used with the TGFU Classification Mark:

"Also Classified as to impact resistance (see Roofing Materials and Systems Directory)"

CERTIFICATE OF COMPLIANCE

Certificate Number R38920
Report Reference R38920-20210921
Date 2021-September-24

Issued to: Delta Metals LLC
18189 Us. Hwy 69
Leon IA, 50144 US

**This is to certify that
representative samples of**

METAL ROOF DECK PANELS; ROOFING SYSTEMS;
ROOF-COVERING MATERIALS, IMPACT RESISTANCE

Product Designation(s): "7/8" Corrugated", "Snap-Lock 1.5",
"Fastener Flange 1", and "Legacy Panel".

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: See Addendum Page

Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

UL LLC

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CERTIFICATE OF COMPLIANCE

Certificate Number R38920
Report Reference R38920-20210921
Date 2021-September-24

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Standard(s) for Safety:

<u>Standard</u>	<u>Title</u>
ANSI/UL 580	Standard for Tests for Uplift Resistance of Roof Assemblies
ANSI/UL 790	Standard Test Methods for Fire Tests of Roof Coverings
ANSI/UL 2218	Impact Resistance of Prepared Roof Covering Materials



Bruce Mahrenholz, Director North American Certification Program

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