



INTERNATIONAL
CODE
COUNCIL®

ICC NTA TEST REPORT

ASTM E84-21a

RENDERED TO: New Castle Steel Inc.
1000 Pine Mill Drive
Marietta, GA 30066

PRODUCT:
Galvanized steel with proprietary layer

Report No.: NCSI092023-52

Test Date(s): 10/19/2023

Report Date: 10/26/2023

Pages: 11

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1.0 General Information

1.1 Product

Galvanized steel with proprietary layer

1.2 Project Summary

ICC NTA, LLC was contracted by New Castle Steel Inc. to evaluate Galvanized steel with proprietary layer in accordance with ASTM E84-21a. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ICC NTA's facility in Bryan, TX.

1.3 Product Description

ASTM E84-21a

Product Name:	Galvanized steel with proprietary layer
Product type:	Metal
Product Use:	Interior/Exterior
Model Name/Sample Number:	Sampling Project: NCSI092023-53
Sample Description:	Coated Steel (24) 11.625 x 24-in.
Color:	Gray
Sample Length:	11.625-in.
Sample Width:	24-in.
Thickness:	18 gauge
Total Weight:	86.4 lbs
Sample Received Date:	10-10-2023
Days in Conditioning:	9

1.4 Qualifications

ICC NTA in Bryan, TX has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC NTA is accredited to perform all testing reported herein.

1.5 Product Sampling

A representative of ICC NTA visited New Castle Steel Inc's facility located in Marietta, GA on 10/02/2023 and selected the materials for the testing reported herein. All test specimens were supplied by New Castle Steel Inc. See photograph in Appendix A for typical sampling mark.

1.6 Witnessing

No representative of New Castle Steel Inc. witnessed the testing reported herein.

1.7 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 65-80°F and humidity in the range of 45-60% RH. All test specimen materials were stored in the laboratory conditioning room of $73.4 \pm 5^\circ\text{F}$ and at a relative humidity of $50 \pm 5\%$ environment for no less than 24 hours prior to testing. The test specimens were conditioned for 9 days and obtained steady state.

2.0 Referenced Standards

ASTM E84-21a Standard Test Method for Surface Burning Characteristics of Building Materials.

3.0 Summary of Results

Flame Spread Index – 0
Smoke Developed Index – 20

3.1 General

This fire-test–response standard for the comparative surface burning behavior of building materials is applicable to exposed surfaces such as walls and ceilings. This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of the materials, products, or assemblies under actual fire conditions.

3.2 Test Specimens

The samples submitted by the manufacturer was identified as Galvanized steel with proprietary layer and was supplied in the form of (24) 11.625-in. x 24-in. panels. They were received without damage.

3.3 Test Setup and Procedure

The product(s) were setup and evaluated in accordance with ASTM E84-21a.

Substrate Used:	None
Mounting Method:	Standard
Support Used:	None
Side Exposed:	Metal facing
Adhesive Used & Coverage Rate (if Applicable):	N/A
Cement Board Used to Cover Sample (Y/N):	Yes
Sample Continuous or Sectioned:	Sectioned
No. & Size of Sections:	(24) 11.625-in. x 24-in.
Lab Ambient Temp (°F):	73
Lab Ambient RH (%):	50
Date Tested:	10-19-2023

3.4 Test Results

TEST DATA

Time to Ignition (mm/ss):	00:00
Maximum Flame Spread (ft):	0.000
Time to Max Flame Spread (mm/ss):	00:00
Maximum Temperature (°F):	529
Time to Max Temperature (mm/ss):	09:45
Total Fuel Burned (cubic feet):	42.588
Flame Spread*Time Area (ft*min):	0.000
Smoke Area (%A*min):	13.503
Unrounded FSI:	0.000
Unrounded SDI:	18.400

TEST OBSERVATIONS OBSERVATIONS

00:00	No Sample Ignition
02:31	Observed discoloration
05:17	Observed Charring on surface.

POST-TEST

0 – 8 ft	Section was charred on surface and discolored.
8 – 16 ft	Section showed discoloration on surface.
16 – 24 ft	Section showed discoloration on surface.

Analysis on Classification Criteria

Based on Flame Spread Index and Smoke Developed Index when tested in accordance with ASTM E84 or UL 723. Three classes of interior finish are specified by the International Building Code (IBC) that describes a set of classification criteria required for interior wall and ceiling finish materials. The classification criteria for all three model codes is the same: ASTM E84 and UL 723 do not include classification criteria for the results obtained from testing.

Class	Flame Spread Index	Smoke Developed Index
A	0-25	0-450
B	26-75	0-450
C	76-200	0-450

4.0 Closing Statement

This report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC NTA, LLC reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and a report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC NTA assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC NTA has no control. ICC NTA has issued this report for the exclusive use of the client to whom it is addressed. Any use or duplication of this report shall not be made without their consent. This report shall only be reproduced in its entirety.

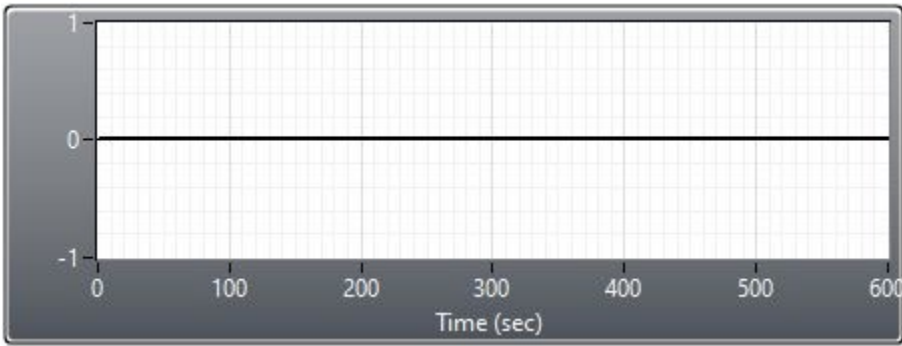
For ICC NTA, LLC:

Brent Mynar
Tested by: Brent Mynar 10/30/2023
Test Technician

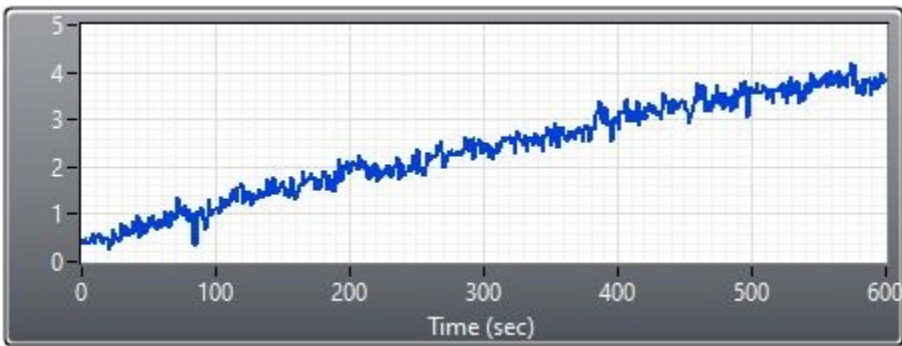
Gabriel Parra
Reviewed by: Gabriel Parra 10/30/2023
Project Engineer

Appendix A - Data

FLAME SPREAD



SMOKE (%A)



TEMPERATURE

Appendix B - Photographs

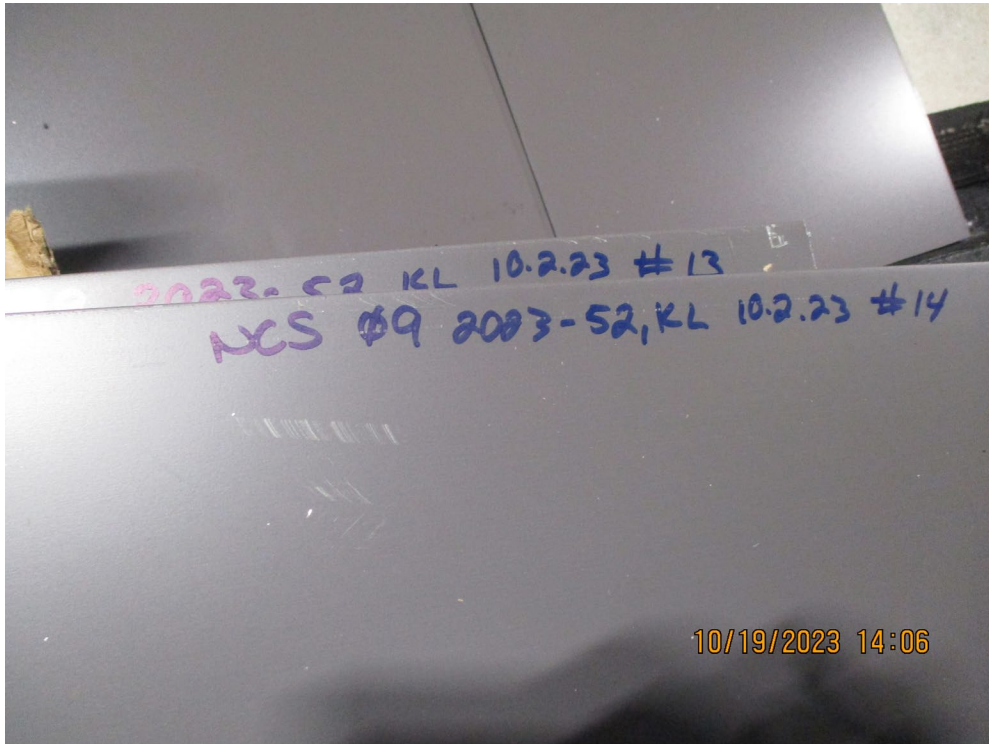


Photo No. 1
Inspector Marking



Photo No. 2
Pre-Test Unexposed Side

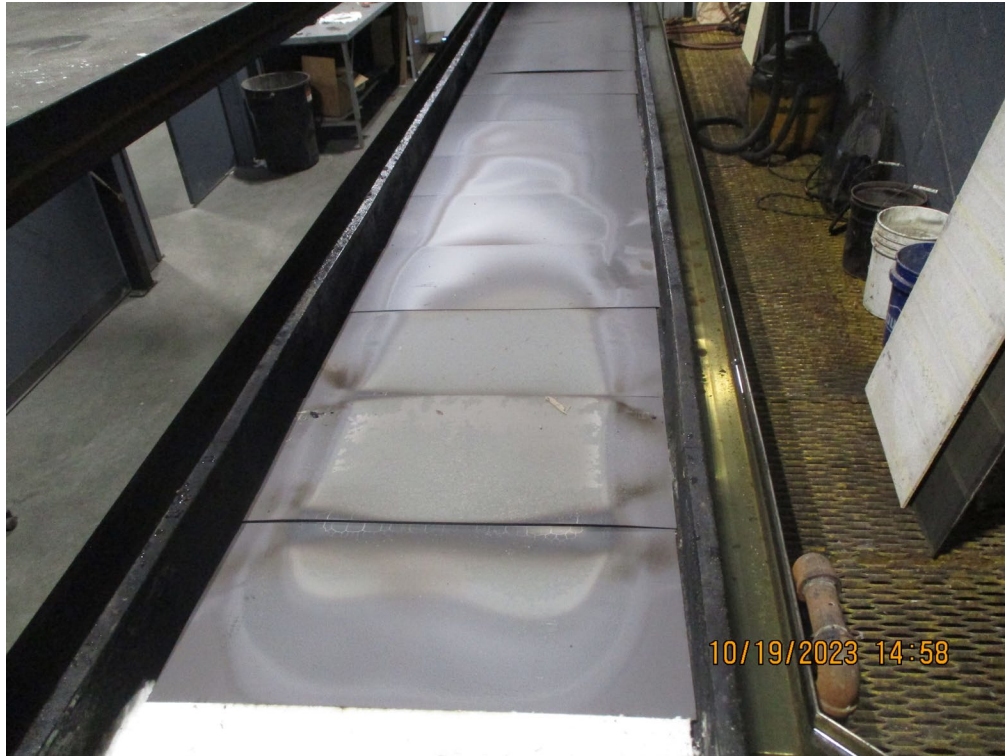


Photo No. 3
Post-Test Unexposed Side

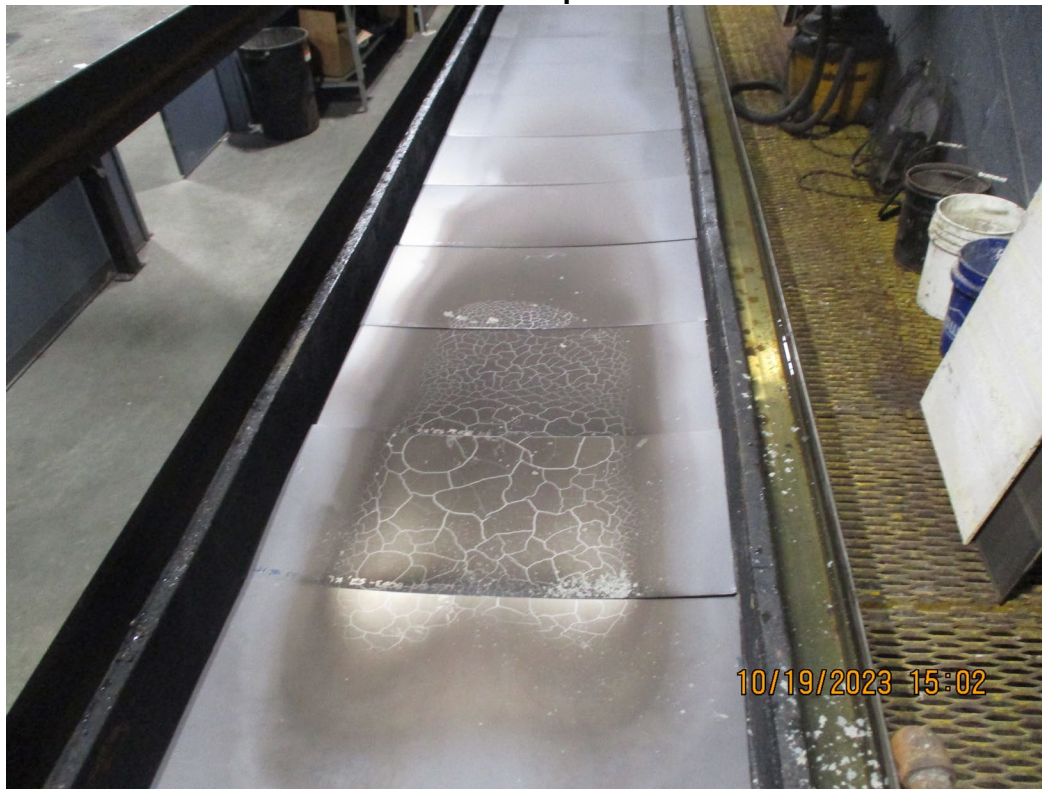


Photo No. 4
Post-Test Exposed Side

Appendix C - Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	10/26/2023	N/A	Original report issue