

Attachment E Coil Processor Product List

Please type or print. You may photocopy this page as necessary.

You have the option of applying for certification for the regional manufacturers/mobile roll-formers to whom you supply processed coil. To do so, please list each manufacturer and provide quality control plan information.

Regional manufacturer/mobile roll-former

Address

Contact name and title

Telephone number

E-mail address

Product name

Quality control program

The Corporate Quality Manager has reviewed and signed the Reference Table for Quality Control Program Auditor

OR

The quality control program has been reviewed according to the requirements in Section IV.F.

Quality control evaluation service

Date of last approval of quality control plan

Regional manufacturer/mobile roll-former

Address

Contact name and title

Telephone number

E-mail address

Product name

Quality control program

The Corporate Quality Manager has reviewed and signed the Reference Table for Quality Control Program Auditor

OR

The quality control program has been reviewed according to the requirements in Section IV.F.

Quality control evaluation service

Date of last approval of quality control plan

Coil Processor Product List, continued

Regional manufacturer/mobile roll-former

Address

Contact name and title

Telephone number

E-mail address

Product name

Quality control program

The Corporate Quality Manager has reviewed and signed the Reference Table for Quality Control Program

Auditor

OR

The quality control program has been reviewed according to the requirements in Section IV.F.

Quality control evaluation service

Date of last approval of quality control plan

Regional manufacturer/mobile roll-former

Address

Contact name and title

Telephone number

E-mail address

Product name

Quality control program

The Corporate Quality Manager has reviewed and signed the Reference Table for Quality Control Program

Auditor

OR

The quality control program has been reviewed according to the requirements in Section IV.F.

Quality control evaluation service

Date of last approval of quality control plan

Attachment F
Metal Construction Association Roofing Certification Program Fee Schedule

Application fee

MCA member company	\$200
Non-member company	\$3,000

Annual renewal fee

MCA member company	\$0
Non-member company	\$3,000

Product fee

	1-5 products	>5 products
MCA member company	\$0	\$0
Non-member company	\$2,500	\$500 per product

All fees non-refundable

Attachment G

Metal Construction Association Roofing Certification Program Requirements for Quality Control Program

1.0 PURPOSE

- 1.1 To establish Quality Control Program requirements that satisfy the precepts of the Metal Construction Association Metal Roofing Certification Program.

2.0 REQUIREMENT FOR REVIEW OR INDEPENDENT INSPECTION

- 2.1 On an annual basis, The Corporate Quality Manager must review and sign the Reference Table for Quality Control Program Auditor (Appendix 1) OR the written Quality Control procedures of each participating company must be reviewed for compliance with certification program guidelines and approved by an independent agency that is accredited as complying with ISO/IEC Standard 17020 or any other accreditation body that is a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement.

3.0 GENERAL REQUIREMENTS

- 3.1 Each participant must have a Quality Control Manual, or equivalent documentation, that demonstrates compliance with the requirements of the program as outlined below.
- 3.2 On an annual basis, each participant must provide MCA a signature from The Corporate Quality Manager verifying review and compliance with the Reference Table for Quality Control Program Auditor (Appendix 1) OR documentation substantiating approval of the Quality Control program by an approved, independent agency and describing changes to the Quality Control program. The independent agency will determine whether written procedures in the Quality Control Manual, or equivalent documentation, comply with requirements of the Metal Construction Association Roofing Certification Program.
- 3.3 As set forth in the Memorandum of Understanding, the MCA reserves the right to evaluate products and audit facilities involved in the Metal Construction Association Roofing Certification Program. These audits may include inspections to determine whether actual procedures of the audited company comply with the requirements stated in this document. For convenience, these requirements are summarized in Appendix 1.

4.0 CONTENTS OF QUALITY CONTROL MANUAL

- 4.1 The manual must contain a valid agreement with a qualified quality control inspection agency for annual reviews of Quality Control procedures, as described above OR process of review by The Corporate Quality Manager.
- 4.2 The manual must document ordering practices for raw materials, substrates, and coatings, as applicable, that are consistent with Metal Construction Association roofing product or finish certifications.
- 4.3 The manual must document procedures to ensure that incoming materials comply with the Base Metal Specifications of Attachment C. This requirement may be satisfied by certificates of compliance from ISO certified vendors, test reports from vendors, internal inspection reports, or equivalent documentation.
- 4.4 The manual must describe the method by which roofing products or coatings can be

traced to inspection records for materials used in their manufacture (substrates, paint finishes and coatings for metal roofing manufacturers; resins and other raw materials for coating manufacturers), as applicable.

- 4.5 The manual must document procedures to guarantee that roofing products and related packaging manufactured from non-conforming materials are not labeled with the Metal Construction Association label.
- 4.6 The manual must contain a table of roofing products, substrates, paint or coating trade names, paint or coating supplier's Metal Construction Association approval numbers, and Metal Construction Association performance categories, as applicable, for which Metal Construction Certification Program approval has been granted.
- 4.7 For roofing manufacturers, the manual must document procedures for labeling Metal Construction Association certified metal roofing products or related packaging.
- 4.8 For roofing manufacturers, the manual must document procedures for displaying the Metal Construction Association Roofing Certification Program logo.

5.0 REQUIRED STATEMENTS

- 5.1 Only roofing products or related packaging that comply with Metal Construction Association performance requirements will be labeled.

Attachment H

Testing Protocol for Acceptable New Substrates for MCA Metal Roofing Certification Program

Prerequisites:

1. Substrate must have a relevant and current ASTM Standard established.
2. Manufacturer technical literature must be readily available.

Painted Products

Test samples of new substrates intended to be painted must be evaluated in triplicates with a Standard Performance paint system as outlined in the MCA Metal Roofing Certification Program. All new substrates being evaluated must show painted performance compared to G-90 HDG and AZ50 55% Al-Zn coated steel controls with same type of paint system.

The control material must comply with Metal Construction Association Certified Standard Painted™ provisions.

All test panels must include:

- 3-T bend
- 5/8" reverse impact
- scribe to the metallic coating

Exterior Coat

- a.) Primer shall meet the coating manufacturer's technical data sheet requirements.
- b.) Topcoat shall be fully cured and of consistent color throughout the Project of uniform color consistent with the established color range. Limits for acceptable production color variations are to be established between the approval source and applicator.

Flexibility and Adhesion

- 1.) T-bend Test (ASTM D 4145): 3T, or better, no tape-off (ASTM D3359), and shall meet the coating manufacturer's technical data sheet requirements.
- 2.) Reverse Impact (ASTM D 2794, 5/8" [16 mm] ball): 3000X metal thickness (expressed in inch-pounds) for steel materials referenced in Attachment C or 1,500X metal thickness for aluminum materials referenced in Attachment C; no tape-off (ASTM D3359), and shall meet the coating manufacturer's technical data sheet requirements.

Accelerated Environmental Tests

Corrosion Resistance

1. Salt Spray (ASTM B 117): taped top edge and at least one vertical edge, leaving drip edge exposed; Record time to white rust and time to red rust. After 1,000 hours evaluate creep at scribe (ASTM D1654) and cut edges. 8F maximum, blistering in the field of the test panel (rated per ASTM D 1654) Performance must be equal or better than the control material.
2. Humidity Resistance (ASTM D 2247 or D 1735): (1,000 hours) evaluate for blistering, cracking, creepage, or corrosion. (rated per ASTM D1654) Performance must be equal or better than the control material.

3. Prohesion Test (ASTM G85 – Appendix 5): Record number of cycles to white rust and to red rust. Performance must be equal or better than the control material.

Exterior Weathering Properties (All exposed edges except the top edge which is protected by clamping arrangement)

- 45° South exposure in coastal Florida environment exposed at a latitude between 25°N and 30° N or equivalent.
- 5° South exposure in an acid rain environment (ATLAS – Jacksonville, FL or equivalent)
- 5° years real-time exposure

Key Parameters:

- Rate blistering in field using rated per ASTM D 1654
- Record scribe (ASTM D1654) creepage and corrosion
- Record edge creepage and corrosion
- Record white rust and/or red rust corrosion or stain at formed and unformed areas

Performance must be equal or better than the control material. Control material must comply with Metal Construction Association Certified Standard Painted™ provisions.

Back Coat

Backer systems for hot-dipped galvanized steel, aluminum-zinc coated steel, and 5% aluminum-zinc coated steel, shall meet the coating manufacturer's technical data sheet requirements.

Unpainted Products

Test samples of new substrates intended to be used in an unpainted condition must be evaluated in triplicates with accelerated corrosion tests and outdoor exposures, as outlined below. All new substrates being evaluated must show unpainted performance compared to a control material of unpainted AZ55 55% Al-Zn coated steel (Acrylic coated). The control material must comply with Metal Construction Association Certified Natural™ provisions

All test panels must include:

- 3-T bend
- 5/8" reverse impact

Accelerated Corrosion Tests

- Salt Spray (ASTM B 117): taped top edge and at least one vertical edge, leaving drip edge exposed; Record % red rust after 500 hours, 1000 hours and 2000 hours. Photography of panels required. Performance must be equal or better than the control material
- Stack Test: all edges exposed; Record white or black rust formation up to 500 hours. Performance must be equal or better than the control material.

Exterior Weathering Properties (All exposed edges except the top edge which is protected by clamping arrangement)

- 45° South exposure in coastal Florida environment exposed at a latitude between 25°N and 30° N or equivalent
- 5° South exposure in an acid rain environment (ATLAS – Jacksonville, FL or equivalent)

- 5 years real-time exposure

Key Parameters:

- Record white, black or red rust in field and on formed area
- Record edge creepage and corrosion

Performance must be equal or better than the control material. Control material must comply with Metal Construction Association Certified Natural™ provisions.

Mills or manufacturers of the new substrates are responsible for the testing required as described in this protocol. All results shall be reported to the Metal Construction Association for their evaluation.

Appendix 1
Reference Table for Quality Control Program Auditor - Roofing Product Manufacturer

Requirement	Section/Page Number(s) where Item is Addressed in Quality Manual	Auditor: Does Quality Control Program Comply with Requirements?
Must have a Quality Control Manual or equivalent	N/A	
Documented approval of Quality Control program by an approved, independent agency and describing changes to the Quality Control Program.		
There should be clear indication through working documents, review of materials and interviews that the guidelines of the Quality Control Program are being followed in practice.		
Valid agreement with a qualified quality control inspection agency for annual reviews of Quality Control procedures		
If an audit has previously been conducted, review the results of that audit and corrective actions to ensure that prior deficiencies as would relate to the Metal Construction Association Roofing Certification Program have been corrected.		
Documented ordering practices for substrates and coatings that are consistent with Metal Construction Association roofing product certification.		
Documented procedures to ensure that incoming materials comply with the MCA Base Material and Finish Specifications		
With a certification issued at least annually, the responsible parties for the coating process of materials used in the Metal Construction Association Certified Roofing Program must attest that all of the specific MCA requirements are being met.		
Incoming materials must include specific information regarding purchase order identification and physical properties as outlined in the MCA guidelines.		
If incoming inspection or testing is part of the roofing manufacturers Quality Practice, all testing equipment used to verify incoming compliance with the MCA guidelines shall comply with calibration and standards traceability.		
Description of the method by which roofing products can be traced to inspection and production records for substrates, paint finishes and coatings		
Documented procedures to guarantee that roofing products and related packaging manufactured from non-conforming materials are not labeled with the Metal Construction Association label		
Table of roofing products, substrates, paint or coating trade names, paint or coating supplier's Metal Construction Association approval numbers, and Metal Construction Association performance categories, as applicable, for which Metal Construction Association Roofing Certification Program approval has been granted.		
Documented procedures for labeling Metal Construction Association certified metal roofing products or related packaging.		
Documented procedures to insure that labeled Metal Construction Association Certified Approved products or related packaging are distributed or resold only under parameters noted in the MCA Memorandum of Understanding.		
Documented procedures for displaying the Metal Construction Association Roofing Certification Program logo		
Statement in the Quality Control Manual that only roofing products or related packaging that comply with Metal Construction Association performance requirements will be labeled.		

Signature of Auditor or Corporate Quality Manager

Date

In the event of non-compliance, see attached documents.