

Memorandum of Understanding between
Metal Construction Association
and
Manufacturing Company
for
Metal Construction Association Roofing Certification Program

I. Common Agreements and Principles

- A. This is a binding agreement between COMPANY (metal roofing manufacturer or coil processor [regional manufacturer roll-forming company]) and the Metal Construction Association (MCA), by which COMPANY joins the Metal Construction Association Roofing Certification Program. The terms of this Memorandum of Understanding (MOU) shall apply to metal roof products for steep slope application sold by COMPANY under its own brand name(s).
- B. COMPANY and MCA agree that the primary purpose of the Metal Construction Association Roofing Certification Program is to promote the use of high quality base metal and coatings in the manufacturing of metal roofing products, thereby reducing the potential of sub-standard quality materials failing prematurely in the marketplace.
- C. COMPANY and MCA agree that publicizing the Metal Construction Association Roofing Certification Program is important to demonstrate the following: The concern of COMPANY for quality, the concern of MCA for quality, and the capability of cooperative programs to achieve industry goals.
- D. COMPANY and MCA agree that as technologies and markets change, it may become desirable to revise the specifications contained in this MOU. COMPANY will be sent notice of proposed changes and have an opportunity to provide feedback.
- E. COMPANY and MCA agree that maintaining public confidence in the Metal Construction Association Roofing Certification Program is critical to achieving the shared goals of COMPANY and MCA.
- F. COMPANY and MCA agree that membership in the Metal Construction Association Roofing Certification Program is essential to the cooperative effort to achieve the shared goals stated above.
- G. COMPANY and MCA agree with the content of the *MCA Guide Specification for Residential Metal Roofing* and any revisions deemed necessary.
- H. COMPANY and MCA agree that Roofing products that are to be walked shall be free of visible liquid lubricants when they are shipped from the plant. The coil ordering and manufacturing processes shall minimize the presence of dry residues at time of shipment and on walking surfaces. For more information on this issue, please refer to the Steel Coalition Lubricant Task Group Final Report, dated May 14, 2002, found at www.metalconstruction.org.

- I. This certification program is intended to apply to metal substrates that would be considered prime quality by the metal roofing manufacturer. It does not apply to rejected material sold as secondary. Material that is downgraded from prime status for issues related to shape, tolerance, camber, or edge defects should not carry the Metal Construction Association certified logo and labels as described in the program.

II. Definitions

Base Metal

Common metal substrates used for metal roofing, including aluminum sheet, hot dip galvanized steel, 55% aluminum-zinc alloy coated steel, 5% aluminum-zinc alloy coated steel, copper, zinc and stainless steel. Some base metal is painted for steep slope roofing applications. 55% aluminum-zinc alloy coated steel, aluminum, copper, zinc, and stainless steel can also be used unpainted. Specifications for each base metal are given in the *MCA Guide Specification for Residential Metal Roofing*, section 2.02 Base Metal, and shown in attachment C.

Premium

Any coated (paint or granular) metal roofing product that meets the premium performance definitions as stated in *MCA Guide Specification for Residential Metal Roofing*, section 2.07.B Finishes Painted (attachment C) or section 2.07.C Finishes Granular Coated, when developed.

Standard

Any coated metal roofing product that meets the standard performance definitions as stated in *MCA Guide Specification for Residential Metal Roofing*, Section 2.07.B Finishes Painted, shown in attachment C or section 2.07.C Finishes Granular Coated, when developed.

Natural

Any unpainted metal roofing product that meets the definitions as stated in *MCA Guide Specification for Residential Metal Roofing*, Section 2.02 Base Metal, shown in attachment C.

Granular Coated Roofing Products

Metal roofing products that incorporate stone granules of natural or manufactured origin embedded into a coating as the exterior surface.

Product

Any profiled, formed, or pressed metal sheet that is intended to be used for the purpose of a steep slope roof panel. The roof panel shall be identified as a product when manufactured by either a Manufacturing Company or from materials supplied by a Coil Processor that have met all terms and conditions noted within the Memorandum of Understanding between MCA and the Manufacturing Company. In cases where a coil processor is submitting an application including one or more regional manufacturers/mobile roll-formers, a per-product fee must be paid for each manufacturer's product. This may be paid by the regional manufacturer or by the coil processor. All products produced by a manufacturer that are of different geometry shall be identified as separate products and appropriate fees must be paid.

Manufacturers of emerging technologies related to new substrates used for metal roofing applications are required to comply with the testing protocol shown in Attachment H.

Steep Slope

A pitch on a roof that is greater than a 2-inch rise over a 12-inch run.

Logo

The graphic or mark “Metal Construction Association Certified” that appears on all packaging, promotional literature, and advertising that indicates the roof product complies with the Metal Construction Association Roofing Certification Program and all referenced performance criteria. (See attachment B.)

Metal Construction Association Certified Label

The phrases “Metal Construction Association Certified Premium Painted™,” “Metal Construction Association Certified Standard Painted™,” “Metal Construction Association Certified Granular Coated™,” or “Metal Construction Association Certified Natural™” are used to describe a roof product that is part of the Metal Construction Association Roofing Certification Program. The label must be displayed on all promotional literature and advertising to describe the product. The label can also, but is not required to, appear on all individual metal roofing products or pieces. The phrases will be registered certification marks of the Metal Construction Association, and will be used in accordance with all rules pertaining to the use of a registered certification mark.

Product Identification

A marking, such as a stock control number, that allows one to trace the roof panel material to a particular coil identification, run date, and coil coater. The product identification must appear on the bottom side of all individual metal roofing products or pieces if no Certified Label is used on the products, pieces or packaging.

Certificate of Compliance

Document provided by MCA to COMPANY identifying the COMPANY as compliant with the Metal Construction Association Roofing Certification Program.

III. Effective Date of MOU and Duration

This MOU shall be effective when signed by both MCA and COMPANY.

Both parties agree that COMPANY may begin to qualify products pursuant to section IV.E., below, beginning upon receipt of notification of approval.

Both parties agree that the terms of this MOU shall govern its implementation until the last day of the month, 12 months following notification of approval. (For example, if notification of approval is made October 15, 2005, the MOU is valid until October 31, 2006.) To maintain participation in the certification program, COMPANY will be required to sign a new MOU and pay the renewal fees. If there are revisions to the program, only those products that meet the revised specifications may be labeled and marketed as Metal Construction Association certified products.

Both parties agree that this agreement can be terminated by COMPANY or MCA at any time, and for any reason, with no penalty or liability to either party. However, both parties agree that termination for noncompliance would only occur in accordance with the procedures of section VIII below.

IV. COMPANY’S Responsibilities

A. Reading and understanding logo use guidelines

COMPANY affirms that it has read, understands, and will abide by the rules for use of the Metal Construction Association certification name and logo provided in attachment A.

B. Product identification and traceability

To demonstrate product identification and traceability, COMPANY must do one of the following:

1. COMPANY shall provide, upon request, a certificate of compliance to contractor or end user.
2. COMPANY shall identify all individual products, pieces, or packaging with EITHER a marking such as a stock control number that is traceable to a specific coil number identification, run date, and coil coater information, OR one of the following labels: “Metal Construction Association Certified Premium Painted™,” “Metal Construction Association Certified Standard Painted™,” “Metal Construction Association Certified Granular Coated™,” or “Metal Construction Association Certified Natural™” depending on compliance with specifications as described in section IV.E of this agreement. The Label must appear in any promotional literature and /or advertising to clearly describe the product.

C. Appointment of liaison

COMPANY agrees to appoint a responsible representative of the company as liaison to MCA for the Metal Construction Association Roofing Certification Program and to notify MCA within one month of any change in liaison designation.

D. Number of products required

COMPANY agrees to develop and/or market during the duration of this agreement one or more products that meet the specifications outlined in section IV.E below.

E. Product qualification for the Metal Construction Association certification label

COMPANY agrees that only those roof products that meet the specifications stated in the *MCA Guide Specification for Residential Metal Roofing*, Edition 1, Sections 2.02.A Base Metal and 2.07 Finishes (attachment C) may qualify as Metal Construction Association Roofing Certification Program compliant.

COMPANY agrees to provide MCA COMPANY’s application form (attachment D) with information that its roof products comply with the specifications. COMPANY will self-certify those products that it determines meet the specifications outlined in section IV.E of this agreement. COMPANIES that are coil processors agree to provide MCA with a list and quality control plan information as specified on attachment E for any regional manufacturers/mobile roll-formers it is including in its application.

COMPANY will provide technical information on a coil coating application that has been tested within six months preceding the renewal date.

F. Quality control program

COMPANY agrees to conduct an on-going quality control program such as but not limited to the MCA QC Guidelines shown in Attachment G to ensure that its compliant roof products continue to meet or exceed the performance specifications as described in section IV.E. This quality control program shall EITHER be approved in writing on an annual basis by a laboratory 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 OR a corporate officer will review and sign the Reference Table for Quality Control Program Auditor form (Appendix B). COMPANY

acknowledges its obligation to provide MCA with documentation on an annual basis of the quality control program and to inform MCA of any changes to the program.

COMPANY agrees to cooperate fully with any audit that may be conducted in connection with the Metal Construction Association Roofing Certification Program.

G. Use of the Metal Construction Association certified logo and name

1. Logo use

To help consumers become familiar with the Metal Construction Association Roofing Certification Program, COMPANY may place the logo on packaging of qualified roofing products in accordance with attachment A. COMPANY will also strive to include the logo, along with the descriptive label, in brochures, manuals, product samples, and advertisements for qualified products. Coil processing companies will provide their participating regional manufacturers/mobile roll-formers with the logo, labels, and attachment A.

2. Registered mark

COMPANY understands that the Metal Construction Association certified labels and logo will be registered marks of the MCA as represented by the administrator of MCA, and are subject to the provisions of Title 15, Chapter 22, United States Code, the various state laws applicable to registered marks, and this Memorandum of Understanding. As such, COMPANY must note this registered status, as appropriate. This may include: a) inserting the registered symbol, ®, next to the Metal Construction Association certified name each time it appears in a brochure, poster, advertisement or b) providing the following statement: "Metal Construction Association Certified is a registered mark of the Metal Construction Association." COMPANY agrees not to alter the logo.

COMPANY understands that participation in the Metal Construction Association Roofing Certification Program does not constitute MCA endorsement of COMPANY or its products.

It is the responsibility of COMPANY to associate MCA, the label, the logo, and the Metal Construction Association Roofing Certification Program only with those specific products that qualify under the terms and conditions of this MOU.

When the Metal Construction Association Roofing Certification Program is used, COMPANY agrees that the product will be accompanied by the following statement: "As a Metal Construction Association Roofing Certification Program manufacturer, COMPANY, (company name) has determined that this product meets the performance guidelines as stated in the *MCA Guide Specification for Residential Metal Roofing*, Sections 2.02 Base Metal and 2.07 Finishes" When the Metal Construction Association certified logo is applied to the product packaging, COMPANY will place this statement in the literature that accompanies the packaging.

If either MCA or COMPANY terminates this agreement, COMPANY will no longer be entitled to apply any Metal Construction Association certified labels or logos to newly manufactured products, and will no longer make reference to the Metal Construction Association Roofing Certification Program so as to convey continuing involvement in the program.

H. Application fees

COMPANY agrees to pay application fees as described in attachment F and the fees shall accompany COMPANY application form (attachment D) sent to MCA. Fees shall be paid in advance and are non-refundable.

I. Employee education and training

COMPANY agrees to provide information about the Metal Construction Association Roofing Certification Program to all of its employees whose jobs are relevant to the development, marketing, sales, and service of Metal Construction Association certified-compliant roof products. COMPANY will also provide training materials for its product dealers, distributors, and installers.

Materials will describe the Metal Construction Association Roofing Certification Program and the COMPANY's participation in the program, provide information about the attributes of high quality base metal and coatings used for steep slope metal roofing products, and identify products that comply with the Metal Construction Association Roofing Certification Program. Materials may include specification sheets, point of purchase displays, informational fact sheets, demonstration models, etc. MCA will prepare, and provide upon request, standard materials such as generic specification sheets or technical bulletins for use by companies.

J. Customer education

1. Identification of qualifying products in the marketplace

COMPANY will place the Metal Construction Association certified logo on packaging. The logo and label will appear on product-related materials such as brochures, manuals and advertisements for qualified roof products only. In addition, COMPANY agrees to identify individual products or pieces with a marking such as a stock control number OR one of the following labels: "Metal Construction Association Certified Premium Painted™," "Metal Construction Association Certified Standard Painted™," "Metal Construction Association Certified Granular Coated™," or "Metal Construction Association Certified Natural™" OR provide, upon request, a certificate of compliance.

2. Consumer awareness through product literature

COMPANY may determine the best manner through which to disseminate the following information to users. Examples of acceptable approaches include: special brochures provided with qualified products, sales literature, point of purchase displays, information in specification sheets, maintenance information, etc. Brochures and advertisements will be worded to avoid misleading interpretations and must follow the rules for use of the Metal Construction Association certified label.

COMPANY will provide general information to end users regarding the benefits of metal roofing products. This information may include a description of the Metal Construction Association Roofing Certification Program and a discussion of the performance attributes of high quality installed metal roofing.

K. Claims for compensation

COMPANY agrees that the activities it undertakes connected with this MOU are not intended to provide services to MCA and that COMPANY will not submit claims for compensation to MCA.

V. MCA Responsibilities

A. Appointment of liaison

MCA agrees to designate a single liaison point for the Metal Construction Association Roofing Certification Program and to notify COMPANY within one month of any change in liaison designation. The signed MOU and other correspondence should be sent to this person.

B. Maintenance of records

MCA agrees to maintain all application forms, records, and substantive correspondence from COMPANY and treat them as confidential except as required by law.

C. Product evaluation and Audit

MCA agrees to accept certification by the COMPANY, whether it is self-determined or determined by an independent third party, that its qualified products satisfy the specifications set forth in this MOU. While this is a self-certifying process, MCA reserves the right to evaluate products, verify submission data, and audit facilities involved in the Metal Construction Association Roofing Certification Program.

D. Consumer acceptance

MCA agrees to encourage consumer acceptance of products introduced under this agreement and bearing the Metal Construction Association certified label. MCA will keep a product listing of compliant products and provide it to the public upon request in hard copy, and electronically on the World Wide Web.

E. Consumer education

MCA agrees to promote metal roofing products, and to inform consumers about the Metal Construction Association Roofing Certification Program by writing articles and/or cooperating with the media by sharing information where appropriate.

VI. Indemnification

The COMPANY agrees to indemnify and hold MCA and its officers, directors, trustees certification program committee, review board, employees and agents, harmless from and against any and all claims, actions, causes of action, suits, losses, damages and liabilities arising under or related to this agreement, including, but not limited to, attorney's fees and costs of defense, arising from any contention or allegation, whether well founded or otherwise, based on any acts or conduct of the COMPANY, MCA or their agents including but not limited to, the COMPANY'S participation in the Metal Construction Association Roofing Certification Program, the COMPANY'S use of the Metal Construction Association certification name or logo, the COMPANY'S marketing, sale, installation or use of products bearing the Metal Construction Association certification name or logo, or claims based on certification, the denial of certification, the withdrawal of certification, or the conduct or findings of any audit in connection with the Metal Construction Association Roofing Certification Program.

VII. LIMITATION OF LIABILITY

IN NO EVENT SHALL MCA BE LIABLE TO THE COMPANY FOR AN AMOUNT IN EXCESS OF THE APPLICATION FEES (SECTION IV.H) PAID BY THE COMPANY BASED UPON ANY CLAIM ARISING OUT OF OR RELATED TO THIS AGREEMENT, INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON CERTIFICATION, THE DENIAL OF CERTIFICATION, THE WITHDRAWAL OF CERTIFICATION, OR THE CONDUCT OR FINDINGS OF ANY AUDIT IN CONNECTION WITH THE METAL CONSTRUCTION ASSOCIATION ROOFING CERTIFICATION PROGRAM, REGARDLESS OF WHETHER THE CLAIM IS BASED ON WARRANTY, CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.

VIII. Conflict resolution

A. Good faith principle

Each party agrees to exercise good faith as a general principle for resolving conflicts under the Metal Construction Association Roofing Certification Program.

B. Notification of problems

Both parties agree to notify each other if any problems or issues arise and to work together to provide maximum public confidence in the program.

C. Procedure for addressing allegations of noncompliant products

If MCA receives information that one or more products certified by COMPANY as Metal Construction Association certified may not meet all of the conditions of this MOU, then MCA will notify COMPANY and attempt to resolve the allegation informally.

If these informal discussions do not produce a mutually agreeable resolution, MCA will submit the case to a review board of industry experts, administered by the MCA, for its review and recommendation.

Corrective action determined by the review board will be communicated to the COMPANY by MCA. COMPANY acknowledges that it will be terminated from the certification program and certification will be withdrawn unless it undertakes the specific corrective action sought by MCA and the review board. If COMPANY disagrees with the decision of the review board, it may initiate an arbitration proceeding under section IX. of the agreement within 60 days. After 60 days post-mailing of the decision to COMPANY, the decision of the review board will be final, conclusive, and binding on the COMPANY.

In the event of disputes or challenges, the non-prevailing party shall pay the costs incurred for the review board, the investigation process, and the arbitration, including reasonable attorney's fees.

MCA will pay its expenses associated with the audit. If the COMPANY does not pass the audit and additional work is required by MCA, any MCA expenses for the additional work will be the COMPANY's responsibility.

D. Notification in writing

If COMPANY believes that MCA is not meeting all of its obligations under this MOU, COMPANY may formally notify MCA in writing. MCA agrees to respond in writing within 30 business days of receiving COMPANY's letter. At that time, MCA will do one of the following: a) undertake the corrective actions sought by COMPANY, or b) explain why such corrective actions cannot be undertaken.

IX. Arbitration

Any controversy or claim arising out of or relating to this agreement or the performance or non-performance of this agreement shall be referred to and finally settled exclusively by arbitration in Chicago, Illinois in accordance with the Commercial Arbitration Rules of the American Arbitration Association. Any claim must be asserted in arbitration within one (1) year after the accrual of the cause of action, or within 60 days for a dispute under section VIII. of the agreement, or it shall be forever barred. The arbitration award shall be final and conclusive on the parties to

this agreement, and judgment upon such award may be entered in any court having jurisdiction. The non-prevailing party shall pay the cost of arbitration, including reasonable attorney's fees.

X. Confidential business information

Both parties understand that information provided by COMPANY to MCA will be treated confidentially.

The undersigned hereby execute this Memorandum of Understanding on behalf of their parties. The signer of this agreement affirms that he/she has the authority to commit COMPANY to participation in the Metal Construction Association Roofing Certification Program.

For the Metal Construction Association:

Signature: _____

Date: _____

Name: _____

Title: _____

For COMPANY: (technical director or authorized company representative)

Signature: _____

Date: _____

Name: _____

Title: _____

Attachment A

Rules for Use of Metal Construction Association Certified Labels and Logo

This document and MOU shall govern all label and logo use for marketing of the Metal Construction Association Roofing Certification Program.

MCA, in furtherance of its objectives to promote and encourage the use of a system for establishing standards to identify performance of base metals and coatings used in steep slope roofing applications, has developed a label and logo, which it desires to be used by certification program participants in promotional activities.

The COMPANY is a participating company in the Metal Construction Association Roofing Certification Program and desires to use the label and logo as set forth in this document.

NOW, THEREFORE, in recognition of the mutual promises contained herein and other good and valuable considerations, the receipt and sufficiency of which are acknowledged, COMPANY and MCA agree to the following:

1. Subject to the following terms and conditions, the MCA hereby grants to the COMPANY a non-exclusive right and license to use the label and/or logo on COMPANY's letterheads, correspondence, promotional materials and the product itself to indicate that COMPANY is a participant in the certification program. ("Permitted Uses") COMPANY shall not use the label and/or logo on any product or product packaging that implies or suggests, directly or indirectly, the MCA endorses or approves of any product or practice of the COMPANY. The label and/or logo simply certify that the product sold is certified in accordance with program rules set forth in the Memorandum of Understanding between the parties. MCA has the right to request, orally or in writing, samples of such letterhead, correspondence, or promotional materials to be provided within ten (10) business days of MCA's request to confirm that the use of label and/or logo are consistent with these rules.
2. COMPANY acknowledges that this license is specific to COMPANY. Neither the license, nor any rights under the license, may be transferred, assigned, or sublicensed to third parties. COMPANY's parents, subsidiaries, or affiliated entities are not authorized to use the label and/or logo, except with the prior written permission of MCA. It is acceptable for coil processing company participants to provide the license to its customers who have been listed on the COMPANY's application and meet the criteria for participation.
3. COMPANY agrees that it will not alter, delete, or amend the logo or certificate of compliance, which it shall receive from the MCA, except with respect to size and color. The COMPANY's use of the label and/or logo will be of such size as to permit legibility of the wording. COMPANY may use the colors as set forth in attachment B or may use black or shades of gray. COMPANY may only use the entire label and/or logo as outlined in attachment B. If using the Label on actual product and product packaging, COMPANY must identify the appropriate label ("Metal Construction Association Certified Premium Painted™," "Metal Construction Association Certified Standard Painted™," "Metal Construction Association Certified Granular Coated™," or "Metal Construction Association Certified Natural™"). Letterheads may show the Metal Construction Association certified logo as shown in attachment B. Promotional materials must also refer to the appropriate label.

4. COMPANY's rights hereunder shall continue only as long as the COMPANY shall remain in good standing with the terms and conditions noted within the MOU.
5. COMPANY acknowledges the ownership of the label and/or logo by MCA, agrees that it will do nothing inconsistent with such ownership and that all uses of the label and/or logo by COMPANY shall inure to MCA. COMPANY agrees that nothing in this license shall give COMPANY any right, title or interest in the label and/or logo other than the right to use the label and/or logo in accordance with this license, and COMPANY agrees that it will not attack the ownership or title of the MCA to the label and/or logo and will not attack the validity of this license.
6. MCA reserves the right to cancel this agreement if, in the sole discretion of the MCA, COMPANY (a) misuses the label , logo, and/or certificate of compliance (b) uses it in such a manner as will likely mislead or deceive the public purchasers, (c) fails to comply with any term of this license, or (d) fails to cooperate with any audit or comply with the results of an audit under the Metal Construction Association Roofing Certification Program.
7. Upon termination or cancellation of this agreement for any reason, the license shall cease and the COMPANY shall immediately cease the use or distribution of any materials containing the label and logo.
8. Nothing in this agreement shall give to COMPANY any right, title, or interest in or to the label , logo, and/or certificate of compliance except the right of permitted uses as specifically set forth in this agreement.
9. COMPANY will indemnify and hold harmless MCA, its officers, directors, certification committee, review board, staff, and agents against any and all claims, judgments, actions, losses, settlements, expenses, or costs of any sort, including reasonable attorney's fees, (collectively "claims") arising out of the COMPANY's use of the label , Logo, and/or certificate of compliance (excepting claims that the label and/or logo infringes another). This paragraph shall survive the termination of this MOU.
10. MCA may make changes to these rules from time to time and will send updated rules as needed.
11. COMPANY acknowledges and agrees that compliance with the terms of these rules is necessary to protect the goodwill and other proprietary interests of MCA and that a breach of these rules by COMPANY would result in irreparable and continuing harm to MCA for which there would be no adequate remedy at law. Accordingly, COMPANY agrees that in the event of any breach of this rules (i) MCA shall be entitled to injunctive relief and/or specific performance, (ii) COMPANY shall not oppose such relief on the ground that there is an adequate remedy at law, and (iii) such equity remedy shall be cumulative and in addition to any other remedies at law or in equity (including monetary damages) which may be available to MCA. The provisions of this section 11 shall survive the termination of the MOU.
12. Any controversy or claim arising out of or relating to this agreement or the performance or non-performance of this agreement shall be referred to and finally settled exclusively by arbitration in Chicago, Illinois in accordance with the Commercial Arbitration Rules of the American Arbitration Association. Any claim must be asserted in arbitration within one (1) year after the accrual of the cause of action, or within 60 days for a dispute under section VIII, or it shall be forever barred. The arbitration award shall be final and conclusive on the parties, and judgment upon such award may be entered in any court having jurisdiction. The non-prevailing party shall pay the costs of the arbitration, including reasonable attorney's fees.

Attachment B

Labels and Logos

Labels:

“Metal Construction Association Certified Premium Painted™”

“Metal Construction Association Certified Standard Painted™”

“Metal Construction Association Certified Granular Coated™”

“Metal Construction Association Certified Natural™”

Logo:



The logo may be printed in black and white, any shade of gray, or PMS 294.

Attachment C

MCA Guide Specification for Residential Metal Roofing, Edition 1 Sections 2.02 Base Metal and 2.07 Finishes

SECTION 2.02. MATERIALS

March 2015

- A. Base Metal – provide one of the following
1. Aluminum: ASTM B209; Alloy 3003, 3004, or 3105, painted
 2. Hot-Dipped Galvanized Steel: ASTM A653/A924, G-90 coating weight, painted or granular-coated
 3. 55% Aluminum-Zinc Alloy Coated Steel: ASTM A792, AZ 50 coating weight, painted or granular-coated. For unpainted, use acrylic-coated AZ55 coating weight.
 4. 5% Aluminum-Zinc Alloy Coated Steel: ASTM A875, GF 90 coating, painted
 5. Copper: EN 504; ASTM B370 temper designation H00 for copper; ASTM B101-02 temper designation H00 for lead-coated copper; unpainted
 6. Zinc: ASTM B69-13 Architectural Rolled Zinc Type 1 and Type 2, minimum thickness 0.027”, unpainted
 7. Stainless Steel: ASTM 240 ; Type 304, natural (non-treated), terne coated (lead-zinc-tin combinations), prismatic (enhanced oxide)

SECTION 2.07 FINISHES

- B. Coil Coated Metal (using liquid coatings)

NOTE: The exterior coating of a prepainted metal residential roofing system shall fall into two categories: *Premium Performance* system and *Standard Performance* system. In the following sections, where a test method differentiates Premium and Standard Performance systems, a distinction is clearly noted. Where the test method does not differentiate the systems, no distinction is made.

1. Pretreatment

Proper cleaning and pretreatment of metals are critical components of the high performance paint finish used for metal roofing panels. To obtain proper long term performance of coatings used for metal roof panels, metal must be cleaned of any contaminants associated with the steel or aluminum processing/manufacturing. Pretreatments then convert the metal surface into a non-metallic coating to obtain proper adhesion by a chemical/physical bond, increasing the durability of both the base metal and paint finish by providing an additional barrier layer and protecting areas where damage to the paint may occur during the life of the roof.

Many different types of pretreatment systems are currently available. The performance of each individual pretreatment may vary depending upon the metals that are being treated, the overlying paint system and the geographical area of the country where the metal roof panels are being installed. Most locations are identified as rural, industrial, marine or severe marine environments.

The most commonly used pretreatments for metal roof panels are as follows:

Complex oxides – used on hot dip galvanized steels

Complex oxides provide excellent flexibility in the forming operation of steel panels. Typically

they do not provide the required additional barrier protection and steel surface conversion in environments subject to acid rain, industrial chemicals and fumes or marine and severe coastal locations. Their use is acceptable in areas where these contaminants are not present in high degree.

Complex chrome oxides – used on aluminum/zinc alloy coated steels and aluminum

Complex chrome oxides have been used extensively on both aluminum/zinc alloy coated steels and aluminum. They are available as conversion coatings as well as dry-in-place coatings. Complex chrome oxides provide excellent formability as well as field-proven corrosion resistance to the base metals.

Zinc phosphates – used on hot dip galvanized steels

Zinc phosphates typically provide increased corrosion resistance of galvanized steels by the surface conversion during the pretreatment process. They have been used commercially for over 100 years, but have undergone evolutionary improvements, including the use of additives and refinement of the process which have increased the durability of steel roofing panels that have difficult forming requirements. This pretreatment is commonly recommended when the galvanized steel roof panel is subject to aggressive environments such as areas subject to acid rain, industrial chemicals and fumes or marine and severe coastal locations.

New emerging technologies are forthcoming in the metal pretreatment industry. Some, such as chrome-free, are already commercially available. The new technologies are being developed to improve or maintain the performance of pretreatments while offering cleaner methods and therefore reducing the environmental impact of pretreatments. The existing technology combined with these newer emerging systems only add to the green aspects of metal roofing and their long life performance as compared to other roofing materials.

Due to the varying types of base metals, pretreatments and paint systems used, the building owner should consult with their metal roof supplier to insure all aspects of the coating system are considered prior to the selection of materials.

2. Exterior Coat

- a.) Primer shall meet the coating manufacturer's technical data sheet requirements.
- b.) Topcoat shall meet the coating manufacturer's technical data sheet requirements, 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.
- c.) Flexibility and Adhesion
 - 1.) T-bend Test (ASTM D 4145): 4T, or better, no tape-off, 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-pounds¹) for referenced steel materials in section 2.02 A of this specification, or 1500X metal thickness for aluminum; no tape-off, and shall meet the coating manufacturer's technical data sheet requirements. (¹ Example: For 0.020" HDG, the reverse impact inch-pounds used would be 0.020 x 3000 = 60 inch-pounds).

d.) Accelerated Environmental Tests—Expected Results

Corrosion Resistance

- 1) Salt Spray (ASTM B 117): 8F, maximum, blistering in the field of the test panel (rated per ASTM D 1654), 3 mm creepage at the scribe, and 5 mm creepage from the edge, after 1,000 hours.
- 2) Humidity Resistance (ASTM D 2247 or D 1735): No blistering, cracking, creepage, or corrosion, after 1,000 hours.
- 3) Pollution Resistance (ASTM D 1308): No visual effects, including color change, when 10 drops of 10% HCl acid are placed on the panel for 15 minutes.

e.) Abrasion Resistance

Abrasion resistance shall be determined using the falling sand test method ASTM D 968. The Abrasion Coefficient shall be calculated according to the formula:

ABRASION COEFFICIENT (Liters per mil) = V/T where:

V=volume of sand used in liters

T=thickness of coating in mils

- 1) **Premium Performance** systems shall have an Abrasion Coefficient Value of 40 minimum.
- 2) **Standard Performance** systems shall have an Abrasion Coefficient Value of 20 minimum.

f.) Weathering Properties (45° South exposure in Florida, open-rack configuration, exposed at a latitude between 25°N and 30° N):

(NOTE: Panels are first to be washed mildly with a dilute soap solution before measuring color change and gloss.)

1.) **Premium Performance** systems require **10 years real-time exposure**.

5 Hunter E maximum color change (ASTM D 2244)

#8 chalk rating; #6 chalk rating for whites (ASTM D 4214, Method A) 50% minimum gloss retention (ASTM D 523)

2.) **Standard Performance** systems requires **5 years real-time exposure**

5 Hunter E maximum color change (ASTM D 2244)

#8 chalk rating; #6 chalk rating for whites (ASTM D 4214, Method A) 30% minimum gloss retention (ASTM D 523)

3. Back Coat

Backer systems for hot-dipped galvanized steel, aluminum-zinc coated steel, and 5% aluminum-zinc coated steel, as referenced in Section 2.02 A, shall meet the coating manufacturer's technical data sheet requirements. Backer systems for aluminum substrates must meet the coating manufacturer's technical data sheet requirements.

Attachment D

Metal Construction Association Manufacturer Certification and Labeling Application

Please type or print all information except your signature.

Company name

Company address

Website

Contact name and title

Contact address (if different from company address)

Telephone number

Fax number

Cell phone number

E-mail address

Type of company

- Roofing product manufacturer
 Coil processor

Type of application

- New product
 Custom color

Product classification

- Shingle Panel
 Painted Natural finish

If you are a coil processor and wish to provide your customers with access to this certification program, please list each regional manufacturer/mobile roll-former you are including in your application on the following page.

Paint or coating supplier's MCA approval number: _____

Paint trade name: _____

Product line or name: _____

Description of roof product:

Quality control evaluation service: _____

Date of last approval of quality
control plan: _____

(Alternatively, a corporate officer may sign the Reference Table for Quality Control Program Auditor.)

- Mill certification report attached. (required)
- Other test reports. (optional)

Fees

Application fee

- \$200 MCA member company
- \$500 non-member company

Annual renewal fee

- \$100 MCA member company
- \$300 non-member company

Total application fee _____

Product fee	1-5 products	6-10 products	11+ products
MCA member company	\$200	\$300	\$400
Non-member company	\$400	\$600	\$800

Number of products for which you are applying for certification: _____

Total product fee _____

Total fees: _____ (add application/renewal fee and per-product fee)

I have enclosed:

- Check payable to MCA
- Discover MasterCard VISA

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Account number

--	--	--	--	--	--	--	--

Expiration date

Statement of Understanding

I hereby apply for certification of the above as an authorized company representative and verify that all information provided is accurate. I authorize the evaluation and validation of this information by MCA. In furtherance of this application, I authorize any individual or organization who may have information concerning this application to provide such information to MCA. I hereby waive any claim for damages, or otherwise that I or the company may have against MCA and any individual or organization that supplies such information by reason of any act or omission by any of them taken in connection with this application. I understand that the decision as to whether the product qualifies for certification rests solely and exclusively in MCA and that its decision is final. By signing and submitting this application, I also agree to be bound by all policies and procedures of MCA.

Signature of technical director or authorized company representative

Date

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

A corporate officer 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

A corporate officer 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

A corporate officer 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

A corporate officer 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 \$500

Annual renewal fee

MCA member company \$100

Non-member company \$300

Product fee

MCA member company

1-5 products

\$200

6-10 products

\$300

11+ products

\$400

Non-member company

\$400

\$600

\$800

All fees are nonrefundable.

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, a corporate officer must review and sign the Reference Table for Quality Control Program Auditor (Appendix B) 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 a corporate officer verifying review and compliance with the Reference Table for Quality Control Program Auditor (Appendix B) 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 Appendix A for paint/coating manufacturers and Appendix B for roofing manufacturers.

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 corporate officer.
- 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 MCA Guide Specification for Metal Residential Roofing. 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 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.
- 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 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 G90 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 referenced steel materials in section 2.02 A of this specification, or 1500X metal thickness for aluminum; 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 1000 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): (1000 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):

1.) 5 years real-time exposure.

- 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 PaintedTM provisions.

Back Coat

Backer systems for hot-dipped galvanized steel, aluminum-zinc coated steel, and 5% aluminum-zinc coated steel, as referenced in Section 2.02 A, 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 TM 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 hrs, 1000 hrs and 2000 hrs . 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):

1.) 5 years real-time exposure.

- 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 A
Requirements for Quality Control Program Reference Table
Paint or Coating 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		
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 the 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 resins and pigments that are ultimately used in MCA approvable coatings are in place.		
Documented procedures to ensure that incoming materials comply with stated standards consistent with MCA guide specifications for residential roofing are in place.		
Documented procedures for control and/or change of the design of a product		
Documented procedures for in-situ adjustments made to process		
Documentation of test panels' identification and duration of exposure at weathering farm(s) used to generate data for outdoor weathering performance		
Documented procedures for the review and testing of weathering panels to ensure that the requirements for self certification are based upon solid, current data.		
Documented weathering panel results shall include the ability to differentiate laboratory produced panels from production panels.		
A description of the method by which coatings used in Metal Construction Association certified roofing products can be ultimately traced back to the batch numbers of raw materials of coatings, specifically those of resins and pigments.		
Documented procedures to insure that only final product conforming coatings are used in the manufacturing of Metal Construction Association certified roofing.		
A table of products of the coating manufacturer, including trade names, Metal Construction Association performance categories, and Metal Construction Association approval numbers for which Metal Construction Association Roofing Certification Program approval has been given must be available.		

Signature of auditor or corporate officer

date

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

Appendix B
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 Guide Specification for Metal Residential Roofing		
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 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		
Documented procedures to insure that labeled Metal Construction Association Certified Approved products 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 that comply with Metal Construction Association performance requirements will be labeled		

 Signature of auditor or corporate officer

 date

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