Une image contenant Police, Graphique, graphisme, capture d’écran

Description générée automatiquement

SPECIFIER NOTE: The purpose of this guide specification is to assist the specifier in correctly specifying aluminum siding with a digitally printed finish and their installation. The specifier needs to edit the guide specifications to fit the needs of specific projects. Contact MAIBEC to assist in appropriate product selections and for detailing assistance. Red text in brackets indicates a selection needs to be made.

SECTION  **07 46 16**

**ALUMINUM CLADDING**

1. GENERAL
   * + 1. SECTION INCLUDES [EDIT AS REQUIRED]
          1. Specifications for 2 mm (0.08") thick folded aluminum cladding with concealed fastening system.
       2. RELATED SECTIONS
          1. [01 74 21] - Management and disposal of construction/demolition waste
          2. [05 41 00] - Structural steelwork
          3. [06 10 00] - Rough carpentry
          4. [06 16 00] – Plywood
          5. [07 20 00] - Thermal protection
          6. [07 25 00] - Sealing barriers
          7. [07 60 00] - Flashing and cladding sheet
          8. [07 92 00] - Sealing compounds
       3. REFERENCES 
          1. National Research Council Canada (NRC)

National Building Code of Canada 2020 (NBC-2020)

* + - * 1. International Code Council (ICC)

International Building Code 2021 (IBC-2021)

* + - * 1. Association canadienne de normalisation (CSA)

CSA-S157 : Conception de la résistance en aluminium

* + - * 1. American Architectural Manufacturers Association (AAMA)

AAMA 2604: Voluntary specification, performance requirements and test procedures for high-performance organic coatings on aluminum extrusions and panels.

AAMA 2605: Voluntary specification, performance requirements and test procedures for high-performance organic coatings on aluminum extrusions and panels.

* + - * 1. American Society for Testing and Materials (ASTM)

ASTM D3359 - Standard Test Methods for the Evaluation of Adhesion by Tape Test.

ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test.

ASTM D968 - Standard Test Methods for Abrasion Resistance of Organic Drop Coatings.

ASTM D2247 - Standard practice for testing the water resistance of coatings at 100% relative humidity.

ASTM B117 - Standard Practice for the Use of Salt Spray (Fog) Apparatus.

ASTM G7 - Standard practice for atmospheric environmental exposure testing of non-metallic materials.

ASTM D523 - Standard Test Method for Specular Gloss.

ASTM B244 - Standard test method for measuring the thickness of anodic coatings on aluminum and other non-conductive coatings on non-magnetic metals using eddy current instruments.

ASTM B209-10 - Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.

* + - * 1. Underwriters Laboratories Canada (ULC)

CAN/ULC-S102 - Standard Test Method for Surface Burning Characteristics of Building Materials and Assemblies.

CAN/ULC-S114 - Standard Test Method for Determining Noncombustibility of Building Materials.

CAN/ULC-S135 - Standard Test Method for the Determination of Combustibility Parameters of Building Materials Using an Oxygen Consumption Calorimeter.

* + - 1. PERFORMANCE REQUIREMENTS
         1. Design cladding to extend continuously over structural supports with attachment to structural supports to support factorial loads in accordance with authority having jurisdiction
         2. Provide a system to compensate for thermal movement of components and structural movement for installation without warping, wind vibration, seal failure and excessive stress on fasteners.
         3. Include expansion joints to accommodate movement within the wall system and between the wall system and the building structure caused by structural movement without permanent distortion, damage to fills, joint twisting, seal failure or water penetration.
      2. SUBMITTALS [EDIT AS REQUIRED]
         1. Actions for submittals - Submit the required documents in accordance with the general conditions set out in section [01 33 00]

Product Data: For each type of product, include the following:

Technical data sheet

Installation Instructions or typical details

Standard drawing details and application

Aluminum material information

Cladding dimensions

* + - * 1. Samples: Submit two (2) 300 mm × 300 mm wall cladding samples corresponding to the proposed materials, colors and finishes
        2. INFORMATIONAL SUBMITTALS

Product test reports : Submit all relevant test results from a qualified testing agency

* + - * 1. CLOSEOUT SUBMITTALS

Maintenance data: For each product type, including related accessories. Include in maintenance manuals.

Warranty: Signed copy of manufacturer's warranty.

* + - 1. QUALITY ASSURANCE [EDIT AS REQUIRED]
         1. Coordinate requirements with Section 01 45 00 “Quality Control”.
         2. Test Reports: Certified testing reports showing compliance with specified performance characteristics and physical properties, including laboratory reports showing compliance with specified tests and standards.
         3. Installer Qualifications: Engage experienced installer, with a minimum of five years’ experience, who has completed systems similar in material, design, and extent to that indicated for Project and with record of successful performance.
         4. Pre-installation meeting:

Conduct meeting at Project Site [Insert location].

Review project drawings and requirements, manufacturer’s installation instructions, and manufacturer’s warranty requirements.

Review wall framing for potential interference and conflicts; coordinate layout and support provisions for interfacing work.

Review field quality control procedures.

* + - * 1. Mockups: Build mockups to verify selections made and to demonstrate aesthetic effects and to set quality standards for fabrication and installation.

Build mockups for siding [and soffit] including accessories:

Include all possible planks style as reference to avoid repetition of pattern.

Include outside corner on one end of mockup and inside corner on opposite end.

* + - 1. SCHEDULE
         1. If on-site measurements cannot be guaranteed, additional time must be provided to confirm the needed measurements. Doors and windows, as well as all other relevant elements, must be installed to guarantee on-site measurements.
      2. DELIVERY, STORAGE, AND HANDLING
         1. Deliver materials and components in the manufacturer's unopened boxes or pallets, properly labeled and identified by product name and brand. Prevent damage during unloading, storage and installation.
         2. Store, protect and handle materials and components in accordance with the manufacturer's recommendations to prevent twisting, bending, mechanical damage, contamination or deterioration.
         3. Store materials and components off the ground, clean, dry and free of dirt and debris. Store away from areas where falling objects or other construction activities may cause damage.
         4. Stack materials and components horizontally on platforms or pallets, covered with a suitable ventilated waterproof tarpaulin. Store materials so that they remain dry, with a positive slope for water drainage. Do not store materials and components in contact with other materials likely to cause stains, dents or other surface damage.
      3. SITE CONDITIONS
         1. On-site measurements: Verify the location of structural elements and substrate openings by field measurements prior to fabrication, and indicate measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid installation delays.
         2. Entreprendre les travaux d'installation lorsque les conditions permettent d'effectuer les travaux conformément aux recommandations du fabricant et aux exigences de garantie.
      4. WASTE MANAGEMENT AND DISPOSAL [EDIT AS REQUIRED]
         1. Séparer les matériaux de déchet pour recyclage conformément à la Section 01 74 21 « Gestion et élimination des déchets ».
      5. WARRANTY [EDIT AS REQUIRED]
         1. Substrate warranty: 5 years against defects in materials and workmanship, as well as for mechanical stability and flatness.
         2. Finish Coating Warranty:

[Powder coated 2605 solid color finish]: XX-year warranty from date of substantial completion. Subject to maintenance of material and finish as recommended by the manufacturer. The finish is warranted to have the following properties:

Resistance to Cracking and Crazing.

Resistance to Chalking: The finish will not chalk more than a numerical rating of 8.

Color stability: No change in the color of the finish exceeding 5 (five) CIE Lab units. CIE illuminant D65.

Gloss Retention: Finish will retain at least 50% of the initial gloss,

Adhesion: The finish will not peel at a rate inferior to class 4B according to ASTM D3359.

See Manufacturer Warranty Sheet for full product and finish warranty details

[Powder coated 2604 solid color finish]: XX-year warranty from date of substantial completion. Subject to maintenance of material and finish as recommended by the manufacturer. The finish is warranted to have the following properties:

Resistance to Cracking and Crazing.

Resistance to Chalking: The finish will not chalk more than a numerical rating of 8.

Color stability: No change in the color of the finish exceeding 5 (five) CIE Lab units. CIE illuminant D65.

Gloss Retention: Finish will retain at least 30% of the initial gloss,

Adhesion: The finish will not peel at a rate inferior to class 4B according to ASTM D3359.

See Manufacturer Warranty Sheet for full product and finish warranty details

[Liquid coated 2604 / 2605 solid color finish]: XX-year Warranty from date of Substantial Completion. Pending maintenance of the material and finishes as recommended by the manufacturer Finish warranted to have the following properties:

Resistance to Cracking and Crazing.

Resistance to Chalking: The finish will not chalk more than a numerical rating of 8.

Color stability: No change in the color of the finish exceeding 5 (five) CIE Lab units. CIE illuminant D65.

Gloss Retention: Finish will retain at least 30/50% of the initial gloss,

Adhesion: The finish will not peel at a rate inferior to class 4B according to ASTM D3359.

See Manufacturer Warranty Sheet for full product and finish warranty details

1. PRODUCTS
   * + 1. MANUFACTURER
          1. Maibec Inc., 984 5e Rue #202, Levis, Quebec Canada G6W 5M6. [www.MAIBEC.com](http://www.MAIBEC.com)
       2. MATERIAL
          1. Aluminum plate: 5052-H32 alloy complying with ASTM B209 standard.
       3. ALUMINUM CLADDING [AND SOFFIT] PLANKS [EDIT AS REQUIRED]
          1. General: Provide as recommended by siding manufacturer for building configuration.

SPECIFIER NOTE:

Select the desired profile specific to the project and delete the other indicated profiles. Where more than one profile or size is selected coordinate with drawings for clarity. Not all profiles are available in all exposed face dimensions. Select accordingly.

* + - * 1. MAP-12 Profile

MAP-12; Exposed face: 12 inches (304.8 mm)

Minimum metal thickness: 0.078 inch (2 mm)

Plank length: [143 inches (3 632,2 mm)]

* + - * 1. MAP-16 Profile

MAP-12; Exposed face: 16 inches (406,4 mm)

Minimum metal thickness: 0.078 inch (2 mm)

Plank length: Plank length: [143 inches (3 632,2 mm)]

* + - * 1. Acceptable Materials: All folded aluminum board profiles are complete with a set of 1“ (25mm) x 0.187” (4.7mm) factory-punched slotted screw holes, repeated every 2” (51mm)
        2. Substitutions: Not Permitted.
        3. Requests for substitutions will be considered in accordance with the guidelines outlined in Section   
           01 60 00 “Product requirements”.
      1. ACCESSORIES [EDIT AS REQUIRED]
         1. General: Provide as recommended by siding manufacturer for building configuration.
         2. Flashings: Provide aluminum flashings conforming to Section 07 62 00 “Sheet Metal Flashings and Trim” at sills, window and door heads and where indicated.
         3. Fasteners: 1-1/2 inch (38 mm) long #8 stainless steel screws or other types with corrosion resistance appropriate for substrate application and environmental conditions and exposure, supplied by other manufacturers.

Les attaches à clip ne sont pas acceptables.

* + - 1. FINISHES [EDIT AS REQUIRED]
         1. [Solid Color Finish]

Powder-coat finish: AAMA 2605 compliant.

Color according to color reference XXXXXXX from [AkzoNobel] [Tiger] [IFS] [PPG]

* + - * 1. [Solid Color Finish]

Powder-coat finish: AAMA 2604 compliant.

Color according to color reference XXXXXXX from [AkzoNobel] [Tiger] [IFS] [PPG]

* + - * 1. Solid Color Finish]

Liquid-coat finish: [AAMA 2605] [AAMA 2604] compliant.

Color according to color reference XXXXXXX from [PAINT MANUFACTURER].

* + - * 1. Flashing: Provide aluminum flashing complying with Section 07 62 00 "Sheet Metal Flashing and Trim" at sill, window and door heads and where indicated.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine substrates for compliance with installation tolerances and other conditions affecting the performance of aluminum cladding [and soffit] and related accessories.
          2. Install only when unsatisfactory conditions have been corrected.
       2. PREPARATION
          1. Clean substrates of spatter and substances harmful to application.
          2. Inspect products before installation and check for transport damage.
          3. Ne pas installer de produits endommagés ou douteux ; les réparer ou les remplacer si nécessaire pour obtenir un aspect lisse, cohérent et de haute qualité.
       3. INSTALLATION
          1. General: Comply with the manufacturer's written installation instructions and shop drawings applicable to the products and applications indicated, unless more stringent requirements apply.
          2. install aluminum cladding and related accessories in accordance with AAMA 1402.

Installer les fixations à une distance maximale de 16 pouces (406mm) au centre.

Laisser un espace de 3/16” (4.7mm) entre la garniture et les planches pour permettre un mouvement thermique.

Lorsque les planches sont jointes bout à bout :

Fixer directement à travers le métal chaque joint de planche avec une (1) vis de verrouillage.

Placer la vis de verrouillage près du joint de planche pour permettre le mouvement thermique aux extrémités opposées. Le reste de la planche doit être fixé au centre des trous oblongs.

* + - * 1. When aluminum cladding is in contact with dissimilar metals, protect against galvanic action by painting the contact surfaces with primer, applying sealant or tape, or installing non-conductive spacers.
        2. Coordonner l'installation des solins comme spécifié dans la section 07 60 00 “Solins et Tôles” et des autres composantes extérieures qui concernent le système de revêtement.
        3. Installer les scellants pour joints comme spécifié dans la section 07 92 00 "Scellants pour Joints" pour assurer une installation étanche aux intempéries

* + - 1. ADJUSTING AND CLEANING
         1. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.
         2. Periodically clean exposed surfaces of battens that are not protected by temporary covering to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
         3. Protect battens from damage during construction. Use temporary protective coverings where needed and approved by the manufacturer. Remove protective covering at the time of Substantial Completion.
         4. Clean and touch up minor abrasions in finishes with air dried coating that matches color and gloss of, and is compatible with, factory applied finish coating.
         5. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction. Before final inspection, clean exposed surfaces with water and a mild soap or detergent not harmful to finishes. Thoroughly rinse surfaces and dry.

**END OF SECTION**

DISCLAIMER: This Specification has been written as an aid to the professionally qualified Specifier and Design Professional. The use of this Guide requires the sole professional judgment and expertise of the qualified Specifier and Design Professional to adapt the information to the specific needs for the Building Owner and the Project, to coordinate with their Construction Document Process, and to meet all the applicable building codes, regulations, and laws. MAIBEC INC. EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR THE PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.