



SpandrelTech Ltd.  
**ALUMASpan™**

July, 2007  
Preformed Metal Cladding 07 42 13  
[Project]

# PREFORMED ALUMINUM WALL PANELS

## SPECIFICATION

*This specification has been numbered, organized and formatted in accordance with the MasterFormat, Section Format and Page Format documents published jointly by Construction Specifications Canada (CSC) and Construction Specifications Institute (CSI).*

*The content of this specification is of general order and must be adapted to the specific requirements of a project. It is offered as a guide to experienced and knowledgeable construction professionals who must assume full responsibility for its interpretation and use. SpandrelTech Ltd. is a panel material supplier only and does not provide installation services.*

*The square brackets [ ] containing texts indicate an option to be inserted by the specifier. Remove brackets and unused options before printing.*

### Part 1. General

#### 1.01 SECTION INCLUDES

A. Custom fabricated, post finished aluminum cladding panel system, including matching parapet cap.

[B. Rigid board insulation mechanically fastened.]

#### 1.02 RELATED REQUIREMENTS

A. Structural steel supports to which cladding framing is attached [Section 05 10 00]

B. Cold formed metal framing [Section 05 40 00]

C. Board insulation behind cladding [Section 07 21 13]

D. Joint sealing [Section 07 92 13]

#### 1.03 REFERENCE STANDARDS

A. AAMA 2605-98 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels

B. AA DAF 45-97 Designation System for Aluminum Finishes.

C. ASTM B209 Standard Specification for Aluminum and Aluminum - Alloy Sheet and Plate; 1996.

#### 1.04 DESIGN REQUIREMENTS

A. Design metal cladding to provide for thermal movement of component materials caused by ambient temperature range of 80°C (176°F) without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.

B. Maximum deviation from vertical and horizontal alignment of erected panels: 1 to 1000.

#### 1.05 SUBMITTALS

A. Submit the following in accordance with Section [01 33 00 - Submittal Procedures]

1. Product Data: Wall cladding manufacturer's printed product literature and specifications.

2. Samples: Duplicate 300 mm x 300 mm (12" x 12") samples of panel material, of colour and profile specified.

3. Shop Drawings: Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, [fascia], [metal furring] [\_\_\_\_], and related work.

- B. Warranty: Provide panel manufacturer's sample warranty certificate.
- C. Maintenance Instructions: Provide panel maintenance and cleaning instructions for [anodized] [painted] finishes.

#### 1.06 QUALITY ASSURANCE

- A. Wall panel manufacturer: to have minimum of ten projects of similar type in the past 5 years.
- B. Installer: to have minimum 5 years' experience installing similar products.
- C. Mock-up
  - 1. Construct mock-up consisting of a minimum of 2 over 2 panels including roof coping and fascia.
  - 2. Include following components in mock-up:
    - a. Structural support framing for cladding system.
    - b. Associated components and accessories.
    - c. Fastening system.
    - d. Metal panel cladding.
  - 3. Erect mock-up as part of building installation, leave in place when accepted.
  - 4. Obtain [Consultant's] [Architect's] [Engineer's] review of mock-up prior to proceeding with cladding installation work.
  - 5. Approved mock-up to serve as standard of quality of installation for this project. All panels must be reviewed in accordance to sample as noted in 1.05 of this section.

#### 1.07 DELIVERY, STORAGE AND HANDLING

*SPEC NOTE: A. below is a unique requirement provided by the panel manufacturer for the handling and installation convenience of the cladding contractor.*

- A. Deliver aluminum panels on a floor-by-floor or elevation-by-elevation basis as required by the contractor for installation convenience.
- B. Do not expose panels with strippable film to direct sunlight or extreme heat.
- C. Discard any damaged products.

#### 1.08 WASTE MANAGEMENT AND DISPOSAL

- A. Separate waste materials for [reuse] [and] [recycling] [\_\_\_\_\_] in accordance with Section [01 74 19 - Construction/Demolition Waste Management and Disposal] [\_\_\_\_\_].
- B. Divert used metal cut-offs from landfill by disposal [into the on-site metals recycling bin] [at the nearest metal recycling facility] [\_\_\_\_\_].
- C. Divert reusable materials for reuse at nearest used building materials facility.
- D. Divert unused caulking, sealants, and adhesive materials from landfill through disposal at hazardous material depot.

### **Part 2. Products**

#### 2.01 MANUFACTURERS

- A. Acceptable Wall Panel Manufacturer: SpandrelTech Ltd., 16 Erin Park Drive, Erin, Ontario N0B 1T0; Tel: (519) 833-9684 or 1-888-833-9684; Fax: (519) 833-0845; Email: sales@spandreltech.com; Web: www.spandreltech.com
- B. Substitutions: Not permitted, however requests for substitutions will be considered providing substitute products and methods of execution are submitted at least 10 days prior to bid closing date.
- C. Accompany requests with evidence substantiating similarity in quality, including technical data sheet, specifications and willingness to supply product on a floor-by-floor or elevation-by-elevation basis.

## 2.02 PANEL MATERIALS

### A. Aluminum Panel:

1. SpandrelTech "Alumaspan" [3003] [5005] [5052] custom fabricated 3 mm (1/8") thickness, [50 mm (2") deep] pan formed units with corners welded and ground smooth, of shape and dimensions as indicated on the drawings, and completely fabricated prior to finish application using [anodized finish] [PPG finish] [Valspar finish].

## 2.03 FABRICATION

### A. Factory fabricated

### B. Tolerances

1. Panel bow: maximum 0.8% of panel dimension in width and length.
2. Panel dimensions: where final dimensions cannot be established by field measurement before completion of panel manufacturing, make allowance for field adjustments as recommended by manufacturer.
3. Panel lines, brakes and angles: sharp, true and surfaces free from warp or buckle.

### C. Painted Finishes (exposed surfaces)

1. Preformed sheet with factory applied paint finish by approved applicator.
2. [ ] colour [selected by [Consultant] [Architect] [Engineer] from manufacturer's standard range].
3. Specular gloss [30] units +/- to ASTM D523.
4. Coating thickness: not less than [22] micrometers.
5. Resistance to accelerated weathering for chalk rating of [8], colour fade [5] units or less and erosion rate less than [20%] to ASTM D822 as follows:
  - outdoor exposure period [2500] hours.
  - Humidity resistance exposure period [5000] hours.

### D. Anodized finishes

1. [Class 1 (.0007")] [Class 2 (.0004")] clear anodic thickness.
2. Integral colour anodic finish: designation AA-[ ], [ ] colour [to match [Consultant's] [Architect's] [Engineer's] sample].
3. Impregnated colour anodic finish: designation AA-[ ], [ ] colour [to match [Consultant's] [Architect's] [Engineer's] sample].
4. Electrolytically deposited colour anodic finish: designation AA-[ ], [ ] colour [to match [Consultant's] [Architect's] [Engineer's] sample].

### E. Touch-up paint: As recommended by panel manufacturer.

### F. Isolation coating: [pvc shims] [bituminous paint] [ ].

### G. Fasteners: [stainless steel] [ ] screws.

### H. Exposed sealants: one-component, silicone base solvent curing, colour to match panel.

## Part 3. Execution

## 3.01 EXAMINATION

- A. Before installation examine alignment of substrate and notify [Consultant] [Architect] [Engineer] in writing if substrate does not comply with requirements of panel installer.

## 3.02 INSTALLATION

### A. Install panels in accordance with shop drawings. Allow for thermal movement.

### B. Maintain following installation tolerances:

1. Maximum variation from plane or location shown on shop drawings: 10 mm/10 m (3/8"/30'-0") of length and up to 20 mm/100 m (3/4"/300'-0").
2. Maximum deviation for vertical member: 3 mm in an 8.5 m (1/8" in a 25'-0") run.
3. Maximum deviation for a horizontal member: 3 mm in an 8.5 m (1/8" in a 25'-0") run.
4. Maximum offset from true alignment between two adjacent members abutting end to end, in line: 0.75 mm (1/32").

### C. As applicable, remove strippable coating from panels as they are erected.

- D. Install wet joint system to prevent rain penetration.
- E. For dry joint system, provide for positive drainage of condensation occurring within wall construction and water entering at joints, to exterior face of wall, in accordance with NRC "Rain Screen Principles".
- F. Separate dissimilar metals using isolation material.
- G. Erect all parts of the assemblies plumb and true in proper alignment to established lines and grades.
- H. Ensure complete nesting of panels on metal framing.
- I. Shims shall not be stacked to cause excessive bending or pull-out forces on anchorage assemblies.
- J. Fasten Z members and girts through [liner sheet] [\_\_\_\_\_] to structural supports with self-tapping screws at 300 mm (12") centres and to suit loading requirements.
- K. Install insulation to requirements of Section [07 21 13]. Butt adjacent boards with joints staggered.
- L. Erect panels to Z members and girts with [\_\_\_\_\_] fasteners] and at spacings to suit loading requirements.
- M. Maintain integrity of air/vapour barrier installed by others.
- N. Gun-apply a continuous bead of compatible sealant to all joints and air/vapour barrier junctions with adjacent construction.
- O. Caulk to provide air tight seals at penetrations in air/vapour barriers where work of this Section penetrates substrates by other trades.
- P. Install continuous closures at exposed cladding terminations to prevent entry of insects.
- Q. Maximum panel bow tolerance to be 0.25% of panel dimension in width or length up to 5 mm (7/64") maximum.

### 3.03 CAULKING

- A. Prime all metal surfaces and other surfaces to receive sealant as directed by the sealant manufacturer.
- B. Caulk all work of this Section with sealant in strict accordance with Section [07 92 13] and to provide a weather-tight installation.

### 3.04 FLASHING, CLOSURE, TRIM AND ACCESSORIES

- A. Install all necessary metal closures, flashings and trims, sealed to stop direct weather penetration.

### 3.05 CLEANING

- A. Anodized finish: Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- B. Paint finish: Clean panels in accordance with AAMA 2605 Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels.
- C. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manufacturer.

### 3.06 TOUCH-UP

- A. Touch-up with matching paint any minor abrasions at screw heads, lap joints and elsewhere, where exposed in the finished work, to the satisfaction of the [Consultant] [Architect] [Engineer].

### 3.07 PROTECTION

- A. Protect finished Work from damage.

**END OF SECTION**



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