Spandrel Specifications

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DIVISION 8 OPENINGS

SECTION 08 81 00 SPANDREL GLAZING

Please note that this specification is not complete until reviewed by a specification professional. Certain parts may need to be deleted or added for this to be complete. This specification guide only speaks to parts pertaining to the spandrel portion of monolithic glazing and insulating glass unit glazing and its pertinence to spandrel glass. Important parts pertaining to the overall glass and glazing portion of a specification have been omitted, please ensure your specification is complete. This is only a guide.

Much of this specification contains information, or will require added information, with respect to the glass fabricator and must be checked for accuracy regarding the manufacturing of the total glass product and not just the opacifier.

PART 1 – GENERAL

1.1 DESCRIPTION/SUMMARY

A. General Information

1. Section includes: OPACI-COAT-300® spandrel glazing for monolithic and insulating glass applications.
2. Other contract documents and requirements of Division 1 & 2 apply to work of this Section.

B. Work Included

Include all labor, materials, equipment, transportation and services to complete installation of opacifying silicone coated SPANDREL GLASS as shown on the drawings and herein specified.

1. Related Sections:
   a. 08 41 00 Entrances and Storefronts
   b. 08 42 00 Entrances
   c. 08 43 00 Storefronts
   d. 08 44 00 Curtain Wall and Glazed Assemblies
   e. 08 50 00 Windows

1.2 REFERENCES

A. United States

1. ASTM C162 - Standard Terminology of Glass and Glass Products
2. ASTM C1036 - Standard Specification for Flat Glass
3. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass -- Kind HS, Kind FT, Coated and Uncoated Glass
4. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials

B. Canada

1. CAN/CGSB - 12.1-M Tempered or Laminated Safety Glass
2. CAN/CGSB - 12.2-M Flat Clear Sheet Glass
3. CAN/CGSB - 12.3-M Flat Clear Flat Glass

C. United States & Canada

1. GANA Glazing Manual
2. GANA 89-1-6 Specification for Environmental Durability of Fully Tempered or Heat-Strengthened Spandrel Glass with Applied Opacifiers

1.3 DEFINITIONS

A. Monolithic glass & coating orientation

1. Surface 1: Exterior surface (surface facing outdoors)
2. Surface 2: Interior surface (surface facing indoors)

B. Insulating Glass Unit & coating orientation

1. Surface 1: Exterior surface of outboard lite
2. Surface 2: Interior surface of outboard lite
3. Surface 3: Exterior surface of inboard lite
4. Surface 4: Interior surface of inboard lite

C. OPACI-COAT-300® Spandrel glass: Glass that has been rendered opaque with a water-based silicone elastomeric spandrel coating for non-vision applications.

1.4 DESIGN REQUIREMENTS

Items in this part of the specification will depend on building requirements such as: wind load, thermal movements, impact loads, failures, as well as possible tempered glass breakage limits. Please ensure this section is completed by a qualified design professional.

1.5 SUBMITTALS

A. Submit 12”x12” (300mm x 300mm) samples of each glass type indicated, with each color required for the spandrel glass. Architect or designer approval must be sought before manufacture.

B. Submit opacifier manufacturer’s Product Data Sheet and glazing instructions.

C. Glazing contractor shall obtain compatibility reports from component manufacturers (such as opacifier, sealants, gaskets, setting blocks, etc.), ensuring that all glazing materials were tested for compatibility.

D. Glazing contractor shall provide test reports showing that the applied opacifier meets durability requirements as shown in GANA 89-1-6 Specification for Environmental Durability of Fully Tempered or Heat-Strengthened Spandrel Glass with Applied Opacifier, in total, without omitted sections.

Please note that other submittal requirements may be added, such as reports and assurances on: security glazing, safety glazing, IGU requirements and testing.

1.6 QUALITY ASSURANCE

A. Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this section or referenced standards.

1. GANA Publications
2. AAMA Publications
3. IGMA/IGMAC Publications

Please note that other QA statements may need to be added that would pertain to the glass fabricator, such as marking of tempered products, safety glazing compliance, etc.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Comply with manufacturer's instruction for receiving, handling, storing and protecting glass & glazing materials.

B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperatures and humidity conditions recommended by the manufacturer.

D. Exercise exceptional care to prevent edge damage to glass, and damage/deterioration to coating on glass.

1.8 PROJECT/SITE CONDITIONS

1.9 WARRANTY

A. The opacifying coating will not flake, peel, chip, blister or develop any noticeable color change for a period of ten (10) years from date of installation when used, installed and applied in accordance with the manufacturer's recommendations. *Fabricator warranty provisions should also be added.*

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. "Manufacturer" is used in this section to refer to a company that produces primary glass or fabricated glass as defined in the referenced standards.

2.2 MATERIALS

A. OPACI-COAT-300® Spandrel Glass.

1. The OPACI-COAT-300® opacifying coating shall have a minimum thickness of 4 mils dry (0.004"/0.10mm). For fallout protection, a minimum thickness of 6.5 mils dry (0.0065"/0.165mm) is required.
2. Only Approved Factory Fabricators (AFFs) are allowed to produce the OPACI-COAT-300® silicone spandrel, as these fabricators are certified and trained by ICD High Performance Coatings in the application and manufacture of the spandrel coating.
3. For a list of Approved Factory Fabricators, please contact ICD High Performance Coatings at 1.360.546.2286 or www.icdcoatings.com.
4. ICD High Performance Coatings is the exclusive manufacturer of OPACI-COAT-300®: ICD High Performance Coatings, 7350 S. Union Ridge Parkway, Ridgefield, WA 98642, USA.

B. Glass type:

C. Glass tint:

D. Reflective or Low-e Coating:

E. Nominal thickness:

F. OPACI-COAT-300® Color Name and Color Number:

G. US & Canadian Requirements:

1. GANA 89-1-6 Specification for Environmental Durability of Fully Tempered or Heat-Strengthened Spandrel Glass with Applied Opacifiers, and with other requirements as specified.

H. Glass strength (Heat-Strengthened or Tempered):

1. OPACI-COAT-300® does not lower the tensile strength of heat-treated glass.
2. If a substitute spandrel coating opacifier is selected, it is important to understand its effect on the tensile strength of heat-treated glass as manufactured and specified for design requirements.

I. Monolithic OPACI-COAT-300® Coated Spandrel Glass

1. Spandrel Coating Orientation: Surface #2
   a. *If* the monolithic spandrel will be installed in a two-sided structural glazing (2SSG) configuration, and project submittal has been approved by the structural silicone manufacturer, the coating does not require any cutbacks.
   b. *If* the monolithic spandrel will be installed in a four-sided structural glazing (4SSG) configuration, the coating must be cut back along all four edges.

J. Insulating Glass Unit (IGU) OPACI-COAT-300® Coated Spandrel Glass.

1. Spandrel Coating Orientation: Surface #2 and #3

   a. The coating *must* be cut back for primary sealant adhesion when applied on surface #2 or #3.

   b. OPACI-COAT-300® is not approved for application on surfaces #2 or #3 (inside units) if a low-emissivity (low-e) coating is also applied on a surface inside the unit. If a low-e coating exists *inside* an IGU, OPACI-COAT-300® must be applied to surface #4.

2. Spandrel Coating Orientation: Surface #4

   a. *If* the coating is applied on surface #4 *and* the unit will be installed in a two-sided structural glazing (2SSG) configuration, and project submittal has been approved by the structural silicone manufacturer, the coating does not require any cutbacks.

   b. *If* the coating is applied on surface #4 *and* the unit will be installed in a four-sided structural glazing (4SSG) configuration, the coating must be cut back along all four edges.

3. Since ICD does not manufacture IGUs, particular specification information was omitted. Correct specification of the total IGU product must be inserted here.

3.1 EXAMINATION

A. Site Verification and Conditions

1. Verify that site conditions are acceptable for installation of the glass.
2. Verify openings for glazing are correctly sized and within tolerances.
3. Verify that a functioning weep system is present.
4. Verify that the minimum required face and edge clearances are being followed.
5. Do not proceed with glazing until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Protection

1. Handle and store product according to GANA Glazing Manual recommendations as well as the recommendations of the manufacturer and fabricator.

B. Surface Preparation

1. Clean and prepare glazing channels and other framing members to receive glass.

3.3 INSTALLATION

A. Cut all glazing sheets square, assure edges are smooth and free of chips and hairline cracks.

B. Cut glazing sheets to field measurements, allow for expansion clearances as recommended by manufacturer of materials.

C. Use setting blocks at quarter points for all glazing. Position setting blocks at bottom quarter points.

D. Use spacers to maintain 3.18mm (1/8”) clearances between sheets, rabbet sides.

E. Strip surplus glazing materials from both sides of glass at an angle, do not undercut.

F. Follow all manufacturer’s glazing recommendations as well as GANA Glazing Manual recommendations.

G. On OPACI-COAT-300® coating, a non-acidic sealant should be used. Sealants or bonding materials with acidic or hydrocarbon-based thinners must NOT be used. Gaskets and setting blocks shall be made of silicone. Contact ICD High Performance Coatings for lists of approved sealants and glazing materials.

H. OPACI-COAT-300® is intended for spandrel or wall-cladding applications only. It is not recommended or approved for use in vision areas.

I. OPACI-COAT-300® is not suitable for field application—it must be applied within a controlled fabricator facility by an Approved Factory Fabricator.

3.4 CLEANING

A. Clean excess sealant or compound from glass and framing members immediately after application, using solvents or cleaners recommended by manufacturers.

B. Glass to be cleaned according to:

1. GANA Glass Informational Bulletin GANA 01-0300 - Proper Procedures for Cleaning Architectural Glass Products.
2. GANA Glass Informational Bulletin GANA TD-02-0402 - Heat-Treated Glass Surfaces Are Different.

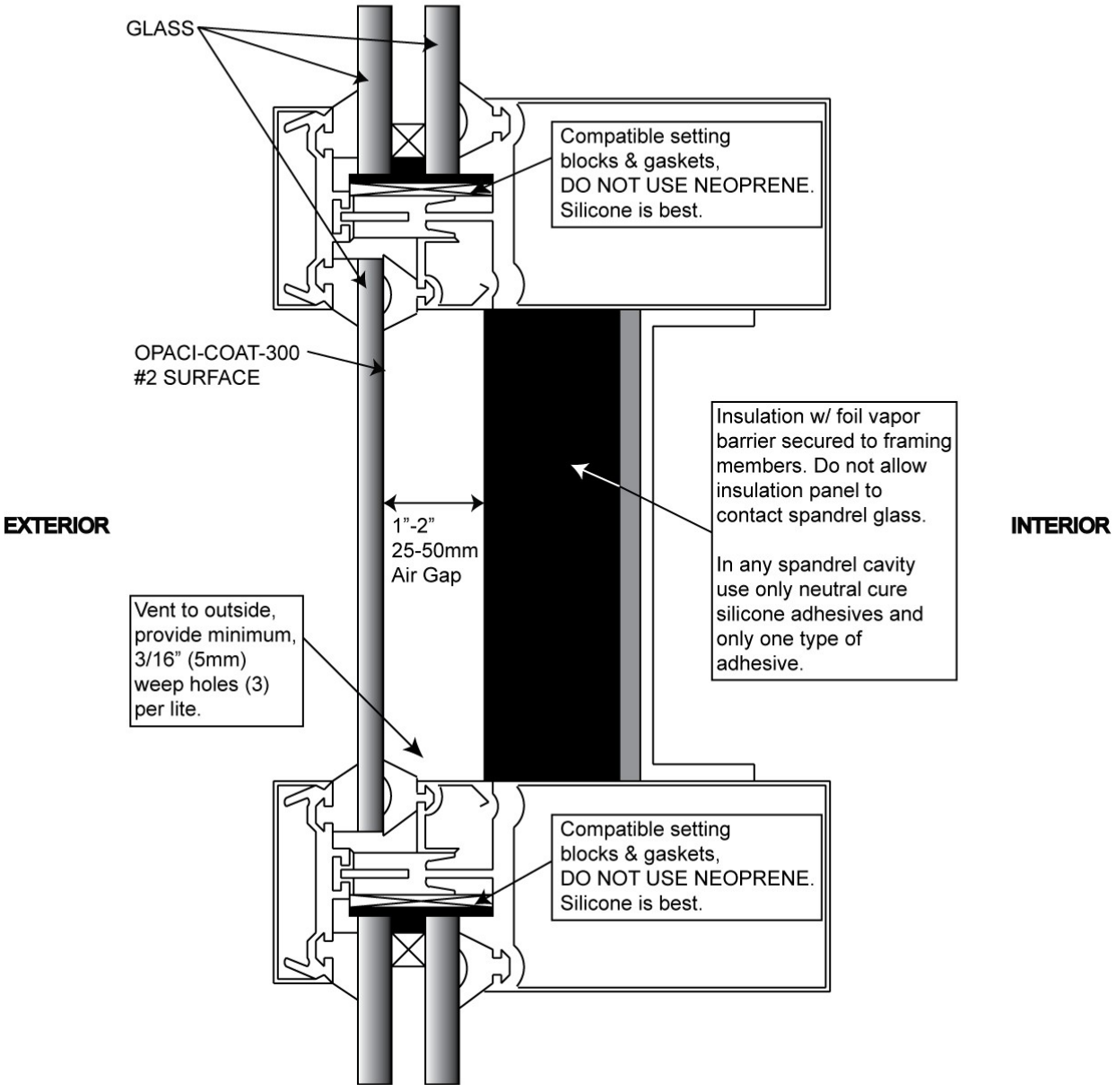
C. Do not use scrapers or other metal tools to clean glass.

D. If OPACI-COAT-300® becomes damaged by visible scratches, field repairs can be made to the coating, please contact ICD High Performance Coatings for specific instructions.

MONOLITHIC SPANDREL (OPACI-COAT-300)

Field Installation
Glass Spandrel

SECTION 08 81 00
GLASS GLAZING
SPANDREL



INSULATED GLASS UNIT SPANDREL (OPACI-COAT-300)

Field Installation
Glass Spandrel

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GLASS GLAZING
SPANDREL