SECTION  – glazing surface films

1. General
   1. SUMMARY
      1. This Section includes requirements for supply and installation of glazing films for aesthetics.
   2. Reference Standards
      1. American Society for Testing and Materials ([ASTM](http://www.astm.org/)):
         1. ASTM D1004‑09, Standard Test Method for Initial Tear Resistance of Plastic Film and Sheeting.
         2. ASTM D3330/D3330M-04 (2010), Standard Test Method for Peel Adhesion of Pressure-Sensitive Tape.
      2. American National Standards Institute ([ANSI](http://www.ansi.org/)):
         1. ANSI Z97.1-20094 Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
   3. Administrative Requirements
      1. Coordination: Coordinate the Work of this Section with the installation of glazing; sequence work so that installation of glazing films coincides with installation of glass materials without causing delay to the Work.
      2. Pre-Installation Conference: Conduct on site pre-installation conference in accordance with Section 01 31 19 – Project Meetings, before installing glazing films and in conjunction with installation of mock-up attended by Contractor, Consultant, Owner, glazing film Installer and glazing film manufacturer’s representative to:
         1. Review methods and procedures related to installation, including manufacturer’s written instructions.
         2. Examine substrate conditions for compliance with manufacturers installation requirements.
         3. Review temporary protection measures required during and after installation.
   4. SUBMITTALS
      1. Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
      2. Action Submittals: Provide the following submittals before starting any work of this Section:
         1. Verification Samples: Submit 300 mm x 300 mm sample of each type of film to the Consultant.
   5. Project Closeout Submissions
      1. Operation and Maintenance Data: Submit manufacturer’s written instructions for cleaning solutions, materials, and procedures, include name of original installer and contact information in accordance with Section 01 33 00 – Submittal Procedures.
   6. QUALITY ASSURANCE
      1. Qualifications: Provide proof of qualifications when requested by Consultant:
         1. Installer: Use installers having experience with projects of similar extent and complexity and that have experience laminating film to glass on site for a minimum of five (5) years.
   7. Mock-ups
      1. Provide required Sample Installation in accordance with Section 01 45 00 – Quality Control.
      2. Sample Installation: Install a sample on site using materials representative of the actual materials being installed:
         1. Sample will be reviewed by the Consultant; acceptable installation can form a permanent part of the Work when found acceptable by the Consultant and will form the basis for acceptance for the remainder of the project.
         2. Remove and replace materials found not acceptable at no cost to Owner or Consultant.
   8. DELIVERY, STORAGE AND HANDLING
      1. Delivery and Acceptance Requirements: Deliver and store packaged materials in their original containers with manufacturer's labels and seals intact; store as recommended by manufacturer in a weatherproof enclosure.
   9. Site Conditions
      1. Ambient Conditions: Proceed with film installation when ambient and substrate temperature conditions are within limits permitted by manufacturer and when glass substrates are free from wetness arising from frost, condensation, or other causes detrimental to adhesion.
2. Products
   1. Glazing Films

SPEC NOTE: Provide the GF# from the Project and Finish Schedule below.

SPEC NOTE: The glazing film identified below is only decorative and used on interior glazing. This is not meant to be used as solar heat gain file or glare reducing placed on exterior glazing. Please consult your Specification Leader if other types of glazing films are required outside of this Section.

* + 1. Translucent Glazing Film (GF-#): Single layer decorative cast film with pressure sensitive ultraviolet resistant adhesive and scratch resistant coating; computer generated and cut and as follows:
       1. Basis-of-Design Materials: Refer to Section 09 06 05 – Product and Finish Schedule for material description required by this project.

1. Execution
   1. Examination
      1. Examine glass and surrounding adjacent surfaces for conditions affecting installation; proceed with installation after verification and correction of surface conditions acceptable to manufacturer.
   2. PREPARATION
      1. Prepare glazing films using computer generated CNC cutting methods to eliminate any cutting of films directly on glass at project site.
      2. Clean glass surfaces of substances that could impair glazing film bond including mould, mildew, oil, grease, dirt, and other foreign materials immediately before beginning installation of films.
      3. Protect window frames and surrounding conditions from damage during installation.
   3. INSTALLATION
      1. Install in accordance with the manufacturer's written instructions and the contract documents, plumb, true, and level over clean glazing.
      2. Install film continuously, but not necessarily in one continuous length, with no gaps or overlaps and as follows:
         1. Install seams vertical and plumb where necessary; horizontal seams will not be allowed.
         2. Do not remove release liner from film until just before each piece of film is cut and ready for installation.
         3. Install film with mounting solution and custom cut to the glass with neat, square comers and edges to within 3 mm of window frame.
         4. Remove air bubbles, wrinkles, blisters, and other defects.
      3. Installation Tolerances: Consultant will view film installation from a distance of 3 metres against a bright uniform sky or background and will accept installation where it appears uniform in appearance with no visible streaks, banding, thin spots, or pinholes; remove and replace with new film when directed by the Consultant for materials not meeting requirements.

END OF SECTION