

**Part 1            General**

**1.1               RELATED SECTIONS**

- .1        Section 01 33 00 – Submittal Procedures
- .2        Section 01 74 19 – Construction/Demolition Waste Management And Disposal
- .3        Section 01 78 00 – Closeout Submittals
- .4        Section 08 11 14 – Metal Doors and Frames
- .5        Section 08 14 10 – Flush Wood Doors
- .6        Section 08 50 50 – Windows

**1.2               REFERENCES**

- .1        Canadian General Standards Board (CGSB):
  - .1        CAN/CGSB 12.1-M90 – Tempered or Laminated Safety Glass
  - .2        CAN/CGSB 12.8-97 AMEND – Insulating Glass Units
  - .3        CAN/CGSB-19.13-M87 – Sealing Compound, One Component, Elastomeric, Chemical Curing
- .2        Insulating Glass Manufacturer's Association of Canada (IGMAC)

**1.3               SUBMITTALS**

- .1        Product Data:
  - .1        Submit manufacturer's printed product literature, specifications and data sheets in accordance with Section 01 33 00.
- .2        Closeout Submittals:
  - .1        Provide maintenance data including cleaning instructions for incorporation into manual specified in Section 01 78 00.

**1.4               DELIVERY, STORAGE AND HANDLING**

- .1        Storage and protection:
  - .1        Crate glass in a manner to protect it from weather, damage and breakage. Individually wrap accessory materials to protect them from damage.
  - .2        Store glass off ground, blocked to prevent racking, twisting or sagging. Store glass vertically on end.
  - .3        Protect glass against scratches, pitting and other surface damage.
  - .4        Protect glass from exposure to moisture or condensation prior to installation.

## **1.5 SITE CONDITIONS**

- .1 Environmental Requirements:
  - .1 Install glazing when ambient temperature is 10 degrees C minimum. Maintain ventilated environment for 24 hours after application.
  - .2 Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

## **1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 19.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, and other packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.

## **Part 2 Products**

### **2.1 GLASS AND SEALED GLASS UNITS**

- .1 Tempered safety glass: to CAN/CGSB 12.1; clear color; minimum 6 mm thick.
- .2 Hermetically sealed units: to CAN/CGSB 12.8; minimum 13 mm air space; both panes of clear color tempered safety glass.

### **2.2 GLAZING ACCESSORIES**

- .1 Glazing gaskets and accessories for windows: as specified in Section 08 50 50.
- .2 Glazing tape: PVC foam type; self-adhesive 1 side or both sides, with release paper backing; acceptable product:
  - .1 Norton Norseal V780 manufactured by Saint-Gobain.
- .3 Glazing sealant: silicone type to CAN/CGSB 19.13-M87; single component; moisture curing; non-staining; non-bleeding; color selected by Consultant; acceptable product:
  - .1 Proglaze manufactured by Tremco Ltd.
- .4 Primers: types recommended to suit applications.
- .5 Setting blocks: neoprene or silicone; 80 to 90 Shore A durometer hardness; sizes recommended by glass manufacturer to suit glazing method, glass weight and glass area.
- .6 Spacer shims: neoprene or silicone; 50 to 60 Shore A durometer hardness; minimum 75 mm long x one half the height of the glazing stop x thicknesses to suit applications; self adhesive on one face.
- .7 Cleaners, primers, and sealers: types recommended by manufacturer of glass and sealants, to suit applications.

## **2.3 FABRICATION**

- .1 Manufacturing sealed glass units:
  - .1 Manufacture hermetically sealed glass units without edge channels (bear edges), tape binding or facings.
  - .2 Manufacture hermetically sealed units using two stage seal method, generally as follows:
    - .1 Achieve primary seal with a polyisobutylene seal between glass and separator.
    - .2 Achieve secondary seal with polysulphide, polyurethane or silicone filling between panes of glass at edge up to separator and primary seal.
  - .3 Place spacers straight and true, with not more than 2 mm bow (in or out) over full length of sealed unit edges.
- .2 Cutting and fitting:
  - .1 Perform all fabrication, cutting and fitting of glass and sealed glass units in shop or plant before delivery to site.
  - .2 Cut glass and sealed glass units to provide uniform edge clearance and glass engagement around full perimeter. Confirm opening sizes prior to cutting or fabricating. Unless otherwise directed by glass manufacturer, allow approximately 6 mm edge clearance for glazing.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

### **3.2 EXAMINATION**

- .1 Verify that openings for glazing are correctly sized and within tolerance.
- .2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

### **3.3 GENERAL GLAZING REQUIREMENTS**

- .1 Protect glass and sealed glass units from edge damage during handling and installation. Inspect glass and sealed glass units during installation and set aside pieces with edge damage that could affect glass and sealed glass units performance.
- .2 Set units of glass in each series with uniformity of pattern, draw, bow and similar characteristics.
- .3 Clean, prime and prepare sealing surfaces at perimeter of glass and sealing surfaces of rabbets before applying glazing gaskets, tapes and sealant. Use solvent and cleaning agents recommended by manufacturer of sealing materials.

- .4 Install glazing gaskets and tapes uniformly with accurately formed corners and bevels. Ensure that proper contact is made with glass and rabbet interfaces.
- .5 Set glass on setting blocks, spaced as recommended by glass manufacturer. Place at least 1 block at quarter points from each corner.
- .6 Center glass in glazing rabbet to maintain required clearances at perimeter on all 4 sides.
- .7 Use spacers and shims in accordance with glass manufacturer's recommendations.

### **3.4 INSTALLATION**

- .1 Install hermetically sealed glass units in window assemblies in accordance with glass manufacturer's recommendations, and to requirements specified in Section 08 50 50.
- .2 Install hermetically sealed glass units in exterior metal doors generally as follows:
  - .1 Use glazing tape, on both sides of glass. Butt tape tight at corners. Use full-length pieces of glazing tape, from corner to corner.
  - .2 Cut glazing tape to length and set in place with stretch allowance during installation.
  - .3 On exterior side, set glazing tape approximately 3 mm below glass sight line to allow cap bead of sealant.
  - .4 On interior side, set glazing tape flush with sight lines to fit openings exactly.
  - .5 Install removable stops and secure in place without displacement of glazing tape.
  - .6 Do not pressure glaze.
  - .7 Trim off glazing tape protruding above top of stops.
  - .8 On exterior side, place cap bead of sealant on exterior side, full perimeter of glass units. Apply sealant to a uniform and level line, flush with sight line. Tool sealant to a smooth concave appearance.
- .3 Install single pane glass in wood doors generally as follows:
  - .1 Use glazing tape, on both sides of glass. Butt tape tight at corners. Use full-length pieces of glazing tape, from corner to corner.
  - .2 Cut glazing tape to length and set in place with stretch allowance during installation.
  - .3 Set glazing tape flush with sight lines to fit openings exactly.
  - .4 Install removable stops and secure in place without displacement of glazing tape.
  - .5 Do not pressure glaze.
  - .6 Trim off glazing tape protruding above top of stops.

### **3.5 CLEANING**

- .1 Remove dirt, scum, plaster, paint spatter and other harmful or deleterious substances from glass promptly and completely, before they establish tight adhesion.
- .2 Use clean water or proprietary glass cleaning solutions that will not damage glass surfaces. Avoid using abrasives, steel wool, razor blades, solvents, alkaline or other harsh cleaning agents.

- .3 Replace broken, scratched, chipped and damaged glass and sealed glass units. Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**