TremGlaze™
WINDOW & DOOR GLAZING PRODUCTS

TECHNICAL BULLETIN:
RESIDENTIAL WINDOW & DOOR IN-PLANT GLAZING

Introduction

For more than 60 years, Tremco has been a market leader in the design, development and manufacture of glazing products for use in residential and commercial construction applications.

During this time, processes have changed dramatically for window systems. Window units have become larger, higher performance glass is available and standards have increased; all placing a greater demand on the glazing materials used to seal and support the glass to or within the surrounding window system.

No single glazing system can solve every application. For this reason Tremco is the only single *source* supplier offering a complete line of TremGlaze residential glazing sealant, tapes, and gaskets. Tremco also offers compatible perimeter caulking and weatherproofing materials for your window installation needs.

Because glazing is so critical to the long-term performance of window and door products it is important that it be done consistently and accurately.

Defective glazing can lead to:

- Insulated glass unit failure (IGU).
- Sill damage.
- Interior or exterior (sheathing) wall damage.
- Litigation claims.
- Customer dissatisfaction.
- Increased service costs.

Whereas appropriate glazing practices will:

- Prevent the infiltration of water/moisture into the glazing channel.
- Secure and support the IGU.
- Allow for movement between the glass and window substrate.
- Manage water entering the glazing channel.
- Extend the service life of the IGU.
- Reduce potential litigation.
- Reduce field service costs.
- Maintain customer satisfaction and your Market reputation.

Factors Influencing Glazing Performance

Many factors can affect the quality of in-plant glazing. The following are key areas of influence:

Sash and pocket dimensions - Careful determination should be made between the glazing system's initial cost and its anticipated service life. The design and dimensions of the sash can affect the long-term performance of the glazing system.

Workmanship - Any glazing system, regardless of its initial cost, must be properly installed if it is to achieve its maximum performance capability. The most expensive system, improperly installed, will perform no better than an inexpensive system.

Similarly, the use of an inexpensive system does not justify *poor* workmanship if the system is expected to properly perform. For example, sealant, regardless of costs, will not bond properly to dirty, damp, or frost laden surfaces.

- Surfaces to be caulked must be clean, dry, and free of contaminants to ensure a proper bond.
- Glazing tapes must be butted (not overlapped) at corners.
- Setting blocks should be installed properly when and where they are required.
- Window washing should not be done until sealant systems have been allowed to fully cure.

Employee Training - Proper in-plant glazing procedures should be regularly reviewed with key employees to continually stress the importance of uniform and consistent glazing practices.

Application Equipment - Use of automated or semi-automated sealant glazing can help eliminate the potential human error that occur in mass production operations. These pieces of equipment can improve accuracy, consistency, flexibility and speed of application. Additionally they offer the added benefits of, reduced waste, reduced clean-up time, and lower raw material costs.

The following organizations offer automated and semi-automated X-Y applicators for in-plant back bedding applications:

- Besten Inc.- AGT-1TM Back Bedding Applicator
- Billeo Manufacturing - Automatic XY Application System
- Erdman Automation Corporation – EACYPLYTM Hand Assist Glazing Machine
- Spadix Technologies, Inc. - GlazemasterTM X-Y Glazing Table

Economics - In today's construction environment, life cycle costing is often used to access the total cost of a glazing system over a specified period of time. For example, what may seem to be an economical glazing component in terms of initial cost, may eventually become increasingly expensive should it require frequent maintenance or replacement. A careful determination should be made between the glazing system's initial cost and its anticipated service life.

In the final analysis, proper glazing is a compromise between the ideal criteria for effective glass support, and the practical considerations of economics, tolerances, and good installation.

Principal Causes of Glazing Failures

- Glazing at temperatures below 40'F (4'C)
- Failure to properly seal mitre, butt, and bedding joints.
- Failure to adequately seal tape joints at corners.
- Failure to properly bed, cushion or center the IGU (insufficient use of sealant or tape).
- Incorrect or non-use of appropriate setting blocks (80-90 duro meter EPDM or Neoprene).
- Shearing of glass (lateral movement), due to improper sizing or placement of setting blocks.

- Insufficient or poorly designed weep (vent) holes.
- Incompatible materials - To insure and maintain long-term performance the sealant or tape material must be compatible with construction materials in which it comes in with.
- Improper pocket depth.

Glazing failures can occur for any number of reasons, most of which are influenced by the above mentioned quality related issues.

Technical Service

Your local Tremco representative, working with our Technical Services staff, can assist in analyzing glazing system design and in developing recommendations for specific glazing applications. Additionally Tremco can assist in the following areas;

- Employee in-plant glazing and installation training.
- Glazing sealant and tape selection.
- Compatibility testing.
- Adhesion testing.

As a single source supplier, Tremco offers a wide range of fully compatible, gunnable sealants, extruded tapes, and standard and custom rubber profiles suitable for use in a variety of residential glazing systems.

For more information visit our web site at www.tremcosealants.com.

TREMCO

Trusted Supplier of Weatherproofing Solutions Since 1928

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