



GLASS CARE

In order to avoid damaging glass, as well as maintain its surface condition and clarity of vision, glass should be protected during all stages from manufacturing to final installation. Everyone understands that glass can be broken, but few people know how improper care can damage its performance.

Most damage occurs early in the life of glass, very often during the construction process. In each phase, starting from production and ending with the final installation and maintenance, glass endures several hazards that can affect its performance and properties.

Glass production

Glass can be damaged during production due to several causes. However, this material is quickly identified and generally does not leave the manufacturing plant. It is crushed and reused as cullet.

Glass storage

During storage, glass is vulnerable to permanent surface damage in the form of staining. Staining is caused by a chemical change or degradation of the glass surface. In some cases it may also evolve into an etching that can severely damage the glazing surface. When water enters between panes of glass, it remains blocked and cannot drain away. As the water starts to evaporate slowly, it forms a concentrated alkaline solution, which causes staining. It is therefore important that glass is stored indoors in a dry, ventilated location.

Construction

During building construction glass should be protected at all times to avoid harmful construction debris, such as paint, plaster and concrete from coming into contact with the glass surface. There are several protection methods that have been implemented through the years. These methods include everything from installing glass after all painting and plastering has been completed to covering the windows with different products such as plastic sheeting, papers and oils.

Cleaning after construction

After the production phase is completed glass should be properly cleaned. There are several differences between ordinary glass cleaning and cleaning after construction. These processes mostly involve removing construction debris from glass without scratching it. This is a delicate procedure, which should be carried on by specifically trained professionals.

Maintenance

This process involves regular and proper glass cleaning.

Source www.glassonweb.com

GLASS STAINING IN STORAGE



During glass storage, particular conditions may provoke staining. It is, therefore, important to know how and where to store glass.

When water enters between panes of glass, it remains blocked and cannot drain away. As the water starts to evaporate slowly, it forms a concentrated alkaline solution, which causes staining. Water vapour condensation poses the same danger. It is, therefore, important that glass is stored indoors in a dry, ventilated location, protected from rain and running water, and protected from wide variations in temperature or humidity.

Source www.glassonweb.com

Due to technological improvements achieved in the last 30 years, glass has become an important building material. More and more building surfaces are covered with glass. Accordingly, a correct selection of glass type is crucial.

When selecting the type of glass used for buildings, various characteristics should be assessed. Here are some of the glass properties to consider:

Solar control

Solar energy can be pleasant and utilisable in many cases, but especially in buildings, it represents a major source of overheating and unpleasant glare. Solar control glass, usually either body-tinted (absorbing) or coated (reflecting), is used to reduce unwanted solar radiant light and heat energy transmitted through glass. The Solar Heat Gain Coefficient (SHGC) is the best measure to determine how well a product blocks heat caused by sunlight. A similar, but much less precise measure of heat gain, is the Shading Coefficient (SC).

Acoustic insulation

The need to restrict sound arriving from the external environment means that glass should be able to shield and insulate the internal spaces of a building. Glass type is the major factor influencing the passage of sound. The most common types of glass used are laminated and insulating glass (Double glazed). Laminated glass incorporates a special acoustic PVB interlayer, which absorbs some of the incident sound energy, reducing its passage. Better sound insulation can also be achieved with double-glazed glass in which vacuum-sealed inner spaces and some gases affect sound insulation and provide acoustic stability.

Thermal insulation

The U value is a measure of the rate of heat loss of a building component. It is expressed as watts per square metre, per degree Kelvin, W/m²K. Lower U-Values are achieved by multiple glazing layers, gases and the use of low-e coatings.

Strength

Glass is subjected to different types of environmental and human loads, which can cause glazed surfaces to malfunction or break. Since each load has a specific impact on glass, with different calculation formulae, it is important to understand each of these phenomena in order to choose the appropriate glass.

Visual appearance

When we talk about visual appearance we have in mind the colour of glass surface. Thanks to the latest manufacturing processes, glass can be made available in several colours. When we combine single sheets of glass in laminated or insulated units, they typically change in overall colour and appearance. Glass colour appearance can be also conditioned by several environmental factors such as sunlight (midday sun or sunset), reflected sky and clouds, etc.

Source www.glassonweb.com