

ClimaGuard® Dry Anti-Condensation Glass

Handling and Processing Guidelines

Introduction

Guardian ClimaGuard® Dry anti condensation glass is equipped with a high quality magnetron coating, providing exceptional product features.

In order to process glass with such an efficient coating system without any adverse effects on quality, a number of important issues have to be considered. This document provides specific instructions regarding storage, handling and processing. Non-compliance with these processing guidelines may lead to damage of the glass or coating and will invalidate any claims.

Storage, Handling

Conditions, that affect non-coated glass, can also have an adverse effect on coated glass products. Glass products must not be stored outside. Storage should be in a dry and clean place, away from glass washers, external doors and corrosive chemicals. Relative humidity in the warehouse should not exceed 70 % and a minimum temperature of 15°C should be maintained in order to prevent condensation forming and damaging the coated surfaces. If a pack has become particularly cold during transportation to the warehouse, do not open the pack until the glass has reached the ambient temperature in the warehouse, to avoid condensation forming on the coating. The warehouse should be well ventilated and all stock rotated (first in, first out).

ClimaGuard Dry is not limited regarding shelf life provided the storage conditions are as mentioned above. Incoming material should be inspected for damage prior to acceptance and any problems reported immediately to the Guardian facility that supplied the product.

It is important to always be aware of which side of the glass is coated. Do not touch the glass surface to identify the coated side. The functional layer is electrically conductive, so may be easily identified with a commercial coating detector or an ohmmeter.

Cutting, Edge Working, Washing

Since the coating is mechanically very durable, ClimaGuard Dry can be cut like normal float glass.

Make sure all tools and appliances which may come into contact with ClimaGuard Dry are absolutely clean.

Edge-deletion is not required. ClimaGuard Dry is compatible to all usual glazing materials. Cleaning can be performed with glass washing machines, which are already commonly used in insulating glass manufacture. The washing machine must be checked, cleaned and maintained at regular intervals in order to ensure it is perfectly clean and operating correctly. The brushes, in particular, must be checked for cleanliness, alignment and ample supply of water, the brushes must not operate dry.

Avoid gluing stickers at the coated surface as it might be possible that the adhesive will change the surface tension permanently.

Heat Treatment

ClimaGuard Dry must be heat treated (tempered, heat strengthened or bent) in order to provide its special anti-condensation performance.

The added performance characteristics require process adjustments to the furnace profile for successful heat treatment. As a rule, furnace temperatures should be decreased and the furnace dip time increased in direct proportion to the infra-red reflection performance (emissivity) of the glass being heat-treated. In general it is necessary to apply a longer heating time to ensure that the glass is heated uniformly. Guardian recommends the use of forced air convection furnaces in order to enable improved heating control of the glass.

SO₂ (Sulphur Dioxide) must not be used at any time during the heat treatment. The SO₂ flow must be discontinued at least 2 hours prior to starting heat-treatment of the glass.

Some shift in outdoor reflected colour and visible light reflectance may be noticed after heat treatment. The colour shift due to heat-treating should be within the normal production tolerance of coated annealed glass.

Installation

ClimaGuard Dry may be used as single glass or in insulated glass units. The coating is usually on surface #1 facing towards the environment (see picture 1a and 1b) in order to reduce the tendency for condensation on the outer side of the glazing.

Typical glazing configurations with ClimaGuard Dry:

Fig. 1a - Double insulating Glass

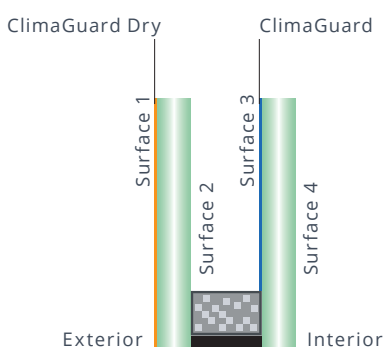
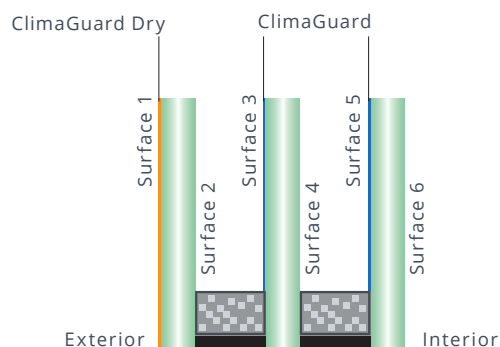


Fig. 1b - Triple insulating Glass



Packaging

When packaging ClimaGuard Dry glass with the coating exposed, it is preferable to use a slot-racking system to prevent glass-to-glass contact. Ensure proper interleaving to minimize the potential for abrasion to the coated and uncoated surface. The use of protection lights for transportation is absolutely necessary.

Avoid gluing stickers at the coated surface as it might be possible that the adhesive will change the surface tension permanently.

Recommended	Not recommended
Lucite powder	Newsprint
Acid-free paper	Silver saver and Kraft papers
	Cardboard
	Powder separators containing acid
	Nut powders

Over long distances, powder separators may become non-uniformly distributed, creating pressure points that could mark the coated or uncoated glass surface.

Precautionary information should accompany the finished window a) Alerting the end user that an exposed coating is present and b) instructing that, when cleaning is required, to use mild, fast drying household cleaners with a clean, soft cloth and avoid razor blades and other metallic scrapers on the exposed low-E coated surface. For more information please see the General Processing Guidelines for Architectural Coated Glass, available on www.sunguardglass.com or through your Guardian Technical Advisory Center.

Care, Cleaning instructions

Guardian ClimaGuard Dry anti-condensation glass is equipped with a high quality magnetron coating, providing exceptional product features. In order to preserve glass with such an efficient coating system without any adverse effects on quality it is important to follow these cleaning instructions:

The window includes a new durable Guardian high-performance glass coating on the exposed surface that faces the exterior of the house building. When installing this window, care must be taken not to damage the surface.

- Glazing sealant should be applied per the sealant manufacturer's instructions.
- Use care when using scrapers (including razor blades) on the glass surface.
- Immediately remove any construction/ installing materials, such as concrete silicone, plaster, paint, or tape.
- Brick wash or other exterior structural cleaning products may contain hydrofluoric and/or phosphoric acid and are corrosive to the window, glass and coatings must only be used with extreme care following the manufacturers' directions including those for dilution, preparation, masking, application and clean-up.

Following installation, any regular cleaning of this glass should be performed (as with any window) using a soft cloth or wet sponge and ordinary non-abrasive household glass cleaners.

For further processing of ClimaGuard Dry, such as silkscreening, bending and laminating, please contact your local Guardian Technical Service.

Warranty

The processing guidelines contained herein are for information purposes only and Guardian does not assume any responsibility for the accuracy or completeness hereof, unless otherwise stipulated by applicable law. It is the sole responsibility of the user to adequately inspect the ClimaGuard® Dry product before each step of fabrication and prior to installation. Failure to apply professional standards, customary instructions and these processing guidelines will automatically void any warranty given by Guardian regarding ClimaGuard Dry product and no claim in relation to ClimaGuard Dry product will be admissible against Guardian if 1) the user's processing capabilities have not been certified by Guardian and 2) ClimaGuard Dry product is damaged in fabrication, handling or due to improper storage, installation or maintenance.

Verification

The signature below verifies that the glass processor has read and understands the full content of these processing directives: Handling and Processing Guidelines / „Guardian_ClimaGuard_Dry_PG_EN_0722“.

Name / Signature: _____ Title: _____

Company / Stamp: _____ Date: _____

Please return this page signed by mail: information@guardian.com.

For additional information regarding storage, handling, fabrication, limited warranty coverage or use of any Guardian glass product, please contact the Guardian Technical Service.

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