Glass with self-cleaning properties

Standard for self-cleaning glass

Glass in building - Coated glass - Part 5 - Test method and classification for the self-cleaning performances of coated glass surfaces, January 2016 is the European standard for self-cleaning glass that is published in January 2016.

This European Standard defines a test method to establish the self-cleaning performances for coatings on glass which utilize sun, rain or a combination of sun and rain to enhance the cleanliness of the glass.

The European Standard applies to class A coated glass as defined in EN 1096-1 and EN 1096-2 for use in outdoor building applications. The test is designed to be applicable for coatings on glass which use hydrophilic or photocatalytic active functionalities to enhance the cleanliness of the glass. The test procedure does not specifically address the durability of the coatings’ self-cleaning functionality.

Self-cleaning coating

Self-cleaning coating is coating on glass substrates allowing obtaining or maintaining in time a cleaner surface as compared to untreated glass;

Hydrophilic coating

Hydrophilic coating is: coating allowing maintaining a water contact angle of less than 20°
Photocatalytic coating

Photocatalytic coating is coating containing a substance that performs one or more functions based on oxidation and reduction reactions under photo irradiation, inducing decomposition and removal of contaminants.

Principle of the test

Standardized glass samples are submitted to a spray of a standardized dirt mixture, followed by a simulation of natural weathering action by applying UV irradiation (to simulate sun) and water spray (to simulate rain). This cycle is repeated twice to ensure better stability of results.

The haze is measured at initial preparation (after cleaning) and final stage (at the end of the second cycle). The evaluation criteria are the haze variation ($\Delta H$) between the sample after initial preparation ($H_{\text{initial}}$) and the sample at the final stage of the test ($H_{\text{final}}$).

We have adapted our EN 1096 Inventory Form for coatings. Contact us if you are interested in these tests for self-cleaning glass and we will send a proper quotation.

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