SLOVENSKI STANDARD
SIST EN 15752-1:2014

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Steklo v gradbeništvu - Samolepljiva polimerna folija - 1. del: Definicije in zahteve

Glass in building - Adhesive backed polymeric film - Part 1: Definitions and requirements

Glas im Bauwesen - Selbstklebende Polymerfolie - Teil 1: Begriffe und Anforderungen

Verre dans la construction - Film polymère adhésif - Partie 1: Définitions et exigences

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81.040.20	Steklo v gradbeništvu	Glass in building
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Glass in building - Adhesive backed polymeric film - Part 1: Definitions and requirements

Verre dans la construction - Film polymère adhésif - Partie 1: Définitions et exigences

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 15752-1:2014) has been prepared by Technical Committee CEN/TC 129 “Glass in building”, the secretariat of which is held by NBN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2015, and conflicting national standards shall be withdrawn at the latest by February 2015.

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Introduction

Adhesive backed polymeric film is designed to be applied to glass to modify the properties and performance of the glass.

Different types of adhesive backed polymeric films are manufactured to modify specific properties of glass including solar energy transmittance, visible light transmittance, emissivity, Ultra Violet transmittance, privacy, appearance, impact behaviour, security, electromagnetic frequency (EMF) attenuation, and surface protection.

1 Scope

This European Standard defines adhesive backed polymeric film based on biaxially oriented polyester film, and the performance characteristics of adhesive backed polymeric film for use on glass in buildings.

This European Standard does not apply to adhesive backed polymeric films manufactured using polyvinylchloride (PVC).

Other requirements, not specified in this standard, may apply to other glass or glazing products, e.g. laminated glass or insulating glass units, when adhesive backed polymeric film is included as part of the original assembly or manufacture of the glazing product. These additional requirements are specified in the appropriate product standard. Adhesive backed polymeric film, in this case, does not lose its mechanical or thermal characteristics.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 356, *Glass in building - Security glazing - Testing and classification of resistance against manual attack*

EN 410:2011, *Glass in building - Determination of luminous and solar characteristics of glazing*

EN 572-1, *Glass in building - Basic soda lime silicate glass products - Part 1: Definitions and general physical and mechanical properties*

EN 572-2, *Glass in building - Basic soda lime silicate glass products - Part 2: Float glass*

EN 673, *Glass in building - Determination of thermal transmittance (U value) - Calculation method*

EN 12600, *Glass in building - Pendulum test - Impact test method and classification for flat glass*

EN 12898, *Glass in building - Determination of the emissivity*

EN 50147-1, *Anechoic chambers - Part 1: Shield attenuation measurement*

EN ISO 4892-1, *Plastics - Methods of exposure to laboratory light sources - Part 1: General guidance (ISO 4892-1)*

EN ISO 4892-2, *Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps (ISO 4892-2)*

EN ISO 8510-2, *Adhesives - Peel test for a flexible-bonded-to-rigid test specimen assembly - Part 2: 180 degree peel (ISO 8510-2)*

ISO 16933, *Glass in building — Explosion-resistant security glazing — Test and classification for arena air-blast loading*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
adhesive backed polymeric film
one or more layers of polymeric film with an adhesive on one external face

Note 1 to entry: It may also incorporate one or more of the following: colouring, UV absorbers, UV inhibitors, metal layer(s), metal alloy layer(s), metal oxide layer(s), ceramic layer(s), scratch or abrasion resistant surface coating, release liner.

Note 2 to entry: The individual layers of polymeric film substrate are laminated together to form the final film.

3.2
external film
adhesive backed polymeric film designed for installation to glass surfaces that are oriented to the exterior

3.3
internal film
adhesive backed polymeric film designed for installation to glass surfaces that are oriented to the interior

3.4
solar control film
adhesive backed polymeric film designed to modify the total solar energy transmittance of a glass substrate, which may include modification of one or more of the following: direct solar transmittance, τ_e, direct solar reflectance, ρ_e, direct solar absorptance, α_e, visible light transmittance, τ_V, ultra-violet transmittance, τ_{UV}

3.5
safety film
adhesive backed polymeric film designed so that, when applied to a glass substrate, the final product can be classified in accordance with EN 12600 to at least 3(B)3

Note 1 to entry: Adhesive backed polymeric film designed as a safety film may also be a security film. In this case, the term adhesive backed polymeric safety / security film may be used.

3.6
security film
adhesive backed polymeric film designed so that, when applied to a glass substrate, the final product can be classified in accordance with one or more of the following: EN 356, EN 1063, EN 13541 and ISO 16933

Note 1 to entry: Adhesive backed polymeric film designed as a security film may also be a safety film. In this case, the term adhesive backed polymeric safety / security film may be used.

3.7
decorative film
adhesive backed polymeric film designed to alter the appearance of a glass substrate

3.8
anti-graffiti film
a sacrificial adhesive backed polymeric film designed so that, when applied to a glass substrate, scratching, etching, painting, writing or similar defacing actions of glass surfaces Is reduced

3.9
ultra violet reducing films
adhesive backed polymeric film designed so that, when applied to a glass substrate, the Ultra Violet transmittance determined in accordance with EN 410 is ≤ 0,0010

3.10
lower emissivity film
adhesive backed polymeric film designed so that, when applied to a glass substrate, the normal emissivity, εn, of a glass surface is ≤ 0,39, when determined in accordance with EN 12898

Note 1 to entry: Adhesive backed polymeric films are available with normal emissivity similar to that of modern low E glass coatings, e.g. ε_n = 0,04.

3.11
privacy film
adhesive backed polymeric film designed so that, when applied to a glass substrate, vision through the glass is reduced

3.12
radio frequency interrupter (RFI) / electro-magnetic frequency (EMF) shielding film
adhesive backed polymeric film designed so that, when applied to a glass substrate, frequencies transmitted through a glass substrate over the 30 MHz to 15 GHz frequency range are attenuated by ≥ 20 dB, when tested in accordance with EN 50147-1

3.13
release liner
a disposable film designed to protect the adhesive coating prior to installation

Note 1 to entry: Typical release liners are either polyester film or polypropylene film, with a silicone coated surface; the silicone surface faces the adhesive surface of the adhesive backed polymeric film.

3.14
splice
a transverse join in an adhesive backed polymeric film roll, i.e. across the width of the roll

3.15
scratch / abrasion resistant surface
a protective coating applied to one external surface of the adhesive backed polymeric film designed to resist scratching and abrasion

Note 1 to entry: The terms scratch resistant and abrasion resistant are used interchangeably and have identical meaning.

3.16
glare reduction
reduction in visible light transmittance after application of the adhesive backed polymeric film to a glass substrate, expressed in %

3.17
clear adhesive backed polymeric film
adhesive backed polymeric film with a visible light transmittance of ≥ 0,80, when determined in accordance with EN 410

3.18
tinted adhesive backed polymeric film
adhesive backed polymeric film modified by the presence of coating(s), fillers, dyes and / or pigments within the structure of the adhesive backed polymeric film with a visible light transmittance of < 0,80 when determined in accordance with EN 410

3.19
metallised adhesive backed polymeric film
adhesive backed polymeric film modified by coating the surface of one or more of the constituent polymeric film layers with metal, alloy, metal oxide, ceramic or other materials capable of being coated onto polymeric film

Note 1 to entry: Each coating may be a single layer of a homogenous material or multiple layers of different materials.

Note 2 to entry: Coatings may be deposited onto polymeric film surfaces by vacuum metallisation, cathodic magnetron sputtering, electron beam and similar techniques.

3.20
tinted / metallised adhesive backed polymeric film
adhesive backed polymeric film modified by the presence of fillers, dye(s) and/or pigments in at least one polymeric film layer and having one or more coating(s) of metals, alloys or metal oxides added to the surface of at least one polymeric film layer

Note 1 to entry: This is composite film containing components of 3.18 and 3.19.

3.21
translucent adhesive backed polymeric film
adhesive backed polymeric film modified by fillers, printing and/or surface roughness to prevent direct vision through the film

Note 1 to entry: The translucence may be in patterns such as stripes, squares, dots or other patterns and effects.

4 Types of adhesive backed polymeric films

Adhesive backed polymeric films are made from one or more polymeric film layers.

The adhesive on the external surface of adhesive backed polymeric films is either a dry polyester adhesive, which is water activated, or a cross-linked acrylic pressure sensitive adhesive. There are instances where a water-based installation solution is required to facilitate the adhesion to a glass substrate. The adhesive system can be specifically designed for a performance characteristic.

A release liner or a water soluble non-sticky coating or both may be used to protect the adhesive layer. These shall be removed prior to film installation.

A typical construction of an adhesive backed polymeric film is shown in Figure 1. Other adhesive backed polymeric film constructions may be simpler or more complex than this example.

Adhesive backed polymeric film manufacturers shall provide installation recommendations.