



# SLOVENSKI STANDARD

## SIST EN 3861:2014

01-februar-2014

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**Aeronavtika - Nekovinski materiali - Prosojnost stekla - Standard za material - Toplotno prednapeto natrijevo kalcitno steklo**

Aerospace series - Non-metallic materials - Glass transparencies - Material standard - Thermally tempered soda lime float glass

Luft- und Raumfahrt - Nichtmetallische Werkstoffe - Transparente Glaswerkstoffe - Werkstoffe Norm - Thermisch vorgespanntes Kalk-Natron-Floatglas

Série aérospatiale - Matériaux non-métalliques - Transparents en verre - Norme de matériaux - Feuilles de verre sodo calcique flotté trempées thermiquement

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**Ta slovenski standard je istoveten z: EN 3861:2013**

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**ICS:**

49.025.99      Drugi materiali      Other materials

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EUROPEAN STANDARD

EN 3861

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2013

ICS 49.025.99

English Version

Aerospace series - Non-metallic materials - Glass  
transparencies - Material standard - Thermally tempered soda  
lime float glass

Série aérospatiale - Matériaux non-métalliques -  
Transparents en verre - Norme de matériaux - Feuilles de  
verre sodo calcique flotté trempées thermiquement

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Transparente Glaswerkstoffe - Werkstoffnorm - Thermisch  
vorgespanntes Kalk-Natron-Floatglas

This European Standard was approved by CEN on 17 November 2012.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Foreword

This document (EN 3861:2013) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 July 2013, and conflicting national standards shall be withdrawn at the latest by July 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 3861:2013 (E)

## Introduction

This standard is part of the series of EN non-metallic materials standards for aerospace applications. The general organisation of this series is described in EN 4385. This standard is a level 3 document as defined in EN 4385. It has been prepared in accordance with TR 7000-5.

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## 1 Scope

This European Standard specifies the requirements relating to universally available and high light transmission, thermally tempered float glass plies, for aerospace applications.

## 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 3001, *Aerospace series — Tempered float glass plies for aircraft applications — Technical specification* <sup>1)</sup>

EN 4385, *Aerospace series — Non-metallic materials — General organisation of standardisation — Links between types of standards* <sup>1)</sup>

TR 7000-5, *Aerospace series — Non-metallic materials — Rules for the drafting and presentation of material standards — Part 5: Glass transparencies* <sup>2)</sup>

## 3 Definitions, symbols and abbreviations

### 3.1 Definitions

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For the purposes of this document the following definitions apply:

#### 3.1.1 Definition of subcase numbering

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In the column “requirement” at the left hand side a subcase number is given. The meaning of these subcase numbers is as follows:

Subcase number	Definition
–	Technical specification
1	Test method
2	Frequency of testing
3	Sample type
4	Test piece definition
5	Conditioning of test piece
6	Testing condition
7	Acceptance criteria

1) Published as ASD-STAN Prestandard at the date of publication of this standard ([www.asd-stan.org](http://www.asd-stan.org)).

2) Published as ASD-STAN Technical Report at the date of publication of this standard ([www.asd-stan.org](http://www.asd-stan.org)).

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Note 1 to entry: The absence of a subcase indicates that the necessary information is given in Table 1 of this standard, e.g. in the reference to the technical standard (characteristic 1.004).

All the necessary information which does not appear is to be found in the referenced technical specification or the relevant test method.

Note 2 to entry: In this material standard, batch acceptance test titles and subcases 7 acceptance criteria are highlighted in the form of a bold frame and bold characters to show that they are mandatory for routine acceptance of the material.

**3.1.2 Type A**

Universally available float glass

**3.1.3 Type B**

High light transmission float glass

**3.1.4 Other definitions**

See EN 3001.

**4 Requirements**

The required characteristics are given in:

- Table 1 — General requirements
- Table 2 — Requirements in the delivery condition
- Table 3 — Requirements as processed to characteristic number 1.013
- Table 4 — Environmental testing requirements as processed to characteristic number 1.013

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Table 1 — General requirements

Characteristic number	Characteristic	Requirements				
1.001	Material description	Glass transparency				
1.002	Formulation	Soda-lime glass, see EN 3001.				
1.003	Form and method of production	Thermally tempered float glass				
1.004	Technical specification	See EN 3001.				
1.005	Grade	A03	A04	A05	A06	A08
	Type	A	A	A	A	A
	Thickness mm	$0 < t \leq 3$	$3 < t \leq 4$	$4 < t \leq 5$	$5 < t \leq 6$	$6 < t \leq 8$
	Grade	A10	A12	A15	A19	B08
	Type	A	A	A	A	B
	Thickness mm	$8 < t \leq 10$	$10 < t \leq 12$	$12 < t \leq 15$	$15 < t \leq 19$	$0 < t \leq 8$
1.010	Storage	Suitable conditions, avoiding surface condensation				
1.011	Shelf life	Not applicable				
1.013	Processing condition	Supplied in final condition of use				
1.093	Quality assurance	See EN 3001.				
1.094	Designation	EN 3861 + grade (according to 1.005)				
1.098	Health and safety	See EN 3001.				
1.999	Notes					