

**SKG-IKOB-KE 3103**  
**01-06-2023**



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## **SKG-IKOB – ASSESSMENT GUIDELINE 3103**

### **FOR THE SKG-IKOB PRODUCT CERTIFICATE FOR SAFETY AND/OR BURGLAR RESISTANT SECTION FILLINGS SUITABLE FOR USE IN BUILDINGS**

Established by the Board of Experts (CvD) for Safe and Burglar-Resistant Products,  
dated 17 April 2023

## GENERAL INFORMATION

This assessment guideline (SKG-IKOB-KE) has been established by the Board of Experts for Safe and Burglar-Resistant Products (CvD V&I), in which the following interested parties from the field of safety and burglar-resistant products are represented:

- BouwendNederland (department glass)
- VHS (association of manufacturers of building hardware)
- FVN (Dutch Federation for security)
- National Police (NP)
- CCV – PKVW (Centre for Crime Prevention and Security)
- VvV (Insurance association)
- SKH (Certification institute for wood products)
- NSSG (Dutch Guild of locksmiths)
- NL-Ingénieurs (Dutch association of engineering consultants and civil engineers)

The Board of Experts guides the certification process and, when necessary, revises this assessment guideline. When the Board of Experts is referred to in this assessment guideline, the board described above is meant.

This assessment guideline is used by SKG-IKOB in conjunction with the SKG-IKOB Regulations. These regulations document the procedure for conducting the assessment to obtain the product certificate, as well as the procedure for external inspection.

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Binding declaration

This assessment guideline was declared binding on 01-06-2023 by the SKG-IKOB Board of Directors.



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## CONTENTS

### GENERAL INFORMATION

<b>1.</b>	<b>INTRODUCTION</b>	<b>4</b>
1.1	General	
1.2	Scope	
1.3	CE-marking	
1.4	Use of standards	
<b>2.</b>	<b>PROCEDURE FOR OBTAINING A QUALITY DECLARATION</b>	<b>6</b>
2.1	Applying for a product certificate	
2.2	Certification Assessment	
2.3	Assessment of the quality system of the applicant	
2.4	Issuance of a product certificate	
2.5	External quality assurance	
<b>3.</b>	<b>REQUIREMENTS AND TESTING METHODS RELATED TO BUILDING DECREE / ENVIRONMENT-RELATED BUILDING DECREE</b>	<b>7</b>
3.1	General	
3.2	Regulations relating to safety	
<b>4.</b>	<b>REQUIREMENTS AND TESTING METHODS NOT RELATED TO BUILDING DECREE / ENVIRONMENT-RELATED BUILDING DECREE</b>	<b>8</b>
4.1	Requirements relating to glazing	
4.1.1	Safety from injury	
4.1.2	Penetration resistance (dynamic-mechanic)	
4.2	Requirements relating to (glass) panels	
4.2.1	Penetration resistance (manual)	
4.3	Classification and marking	
<b>5.</b>	<b>REQUIREMENTS FOR THE QUALITY SYSTEM OF THE APPLICANT</b>	<b>10</b>
<b>6.</b>	<b>MONITORING BY SKG-IKOB</b>	<b>11</b>
<b>7.</b>	<b>REQUIREMENTS FOR THE CERTIFICATION BODY</b>	<b>12</b>
7.1	General	
7.2	Certification staff	
7.3	Quality requirements	
7.4	Report of admission assessment	
7.5	Certification decision	
7.6	Layout of the quality declaration	
7.7	Validity of SKG-IKOB product certificate	
7.8	Sanctions policy	
7.9	Report to Board of Experts	
7.10	Interpretation of the requirements	
<b>8.</b>	<b>LIST OF SPECIFIED DOCUMENTS</b>	<b>14</b>
8.1	Statutory Regulations	
8.2	Standards and normative documents	

## 1. INTRODUCTION

### 1.1 GENERAL

The requirements specified in this assessment guideline (SKG-IKOB-KE) are used by SKG-IKOB to award and maintain an SKG-IKOB product certificate.

The quality declaration issued is referred to as "SKG-IKOB product certificate". A model of the quality declaration is included in Annex 1.

A SKG-IKOB product certificate can only be issued if the applicant is responsible for supplying the section filling ready for the appropriate use.

These SKG-IKOB Quality Requirements replace SKG-IKOB Quality Requirements 3103 dated 04-04-2013. The SKG-IKOB Product Certificates issued on the basis of the replaced version remain valid.

### 1.2 SCOPE

The products certified under this SKG-IKOB-KE are intended for use as safety and/or burglar-resistant section fillings in exterior and/or interior partition structures in buildings.

In addition to the properties with regard to burglary resistance and/or injury resistance, the products that are certified under this SKG-IKOB-KE are not assessed for other (Building Decree / Environment-related Buildings Decree) properties such as fire resistance, thermal insulation or sound insulation.

Examples of section fillings which can be certified under this assessment guideline are:

- a. Thermally toughened glass;
- b. Laminated glass;
- c. Films applied to glass, whether in the factory or otherwise;
- d. Panelling, whether or not composed from multiple (transparent) materials, possibly in combination with glass.

### 1.3 CE-MARKING

Relationship European Construction Products Regulation (CPR, EU 305/2011):

The following harmonized European standards apply to (some of) the products covered by this assessment guideline:

- NEN-EN 12150-1: Glas voor gebouwen - Thermisch gehard natronkalkveiligheidsglas
- NEN-EN 14449: Glas voor gebouwen - Gelaagd glas en gelaagd veiligheidsglas
- NEN-EN 14179-2: Glas voor gebouwen - Heat soaked thermisch gehard natronkalk-veiligheidsglas
- NEN-EN 13024-2: Glas voor gebouwen - Thermisch gehard borosilicaat veiligheidsglas

These products must be provided with CE-marking as described in the relevant standard.

### 1.4 USE OF STANDARDS

In this SKG-IKOB-KE, reference is made to both Building Decree / Building Environment Decree and non-Building Decree / Environment-related Buildings Decree. If the Building Decree / Environment-related Buildings Decree change, these will be included in this SKG-IKOB-KE from the date of inclusion in the Buildings Decree / Buildings Environment Decree (see publication of the Government Gazette).

If non-Building Decree / Construction Works Decree change living environment-related standards or guidelines, the Board of Experts will determine on a case-by-case basis whether the changes will be included in this SKG-IKOB-KE.

## **2. PROCEDURE FOR OBTAINING A QUALITY DECLARATION**

### **2.1 APPLYING FOR A PRODUCT CERTIFICATE**

The application for a quality declaration on the basis of this assessment guideline must be directed to SKG-IKOB in Geldermalsen.

SKG-IKOB provides applicants with all the relevant information relating to the application for the product certificate by means of documentation.

### **2.2 CERTIFICATION ASSESSMENT**

SKG-IKOB investigates whether the desired statements about the product to be certified are justified. This means that the performance of the product in relation to safety and/or burglar resistance is assessed. This assessment can be made on the basis of results of previous tests, or by testing the product to be certified on the basis of the relevant standard.

If the supplier submits reports from inspection institutes or laboratories to show that the requirements of this SKG-IKOB-KE are satisfied, then it must be shown that these have been drawn up by an institute that satisfies the relevant accreditation standard:

- NEN-EN-ISO/IEC 17025 for laboratories;
- NEN-EN-ISO/IEC 17020 for inspection institutes;
- NEN-EN-ISO/IEC 17065 for certification institutes that certify products;
- NEN-EN-ISO/IEC 17021 for certification institutes that certify quality systems;
- NEN-EN-ISO/IEC 17024 for certification institutes that certify persons;

The institute is considered to meet these criteria if an accreditation certificate can be provided, issued by the Dutch Accreditation Council (RvA) or an accreditation institute with whom the RvA has a mutual acceptance agreement. This accreditation must relate to the assessment required for this SKG-IKOB-KE. If no accreditation certificate can be provided, the Certification Body will assess whether the accreditation requirements are met, or will carry out the relevant tests itself.

### **2.3 ASSESSMENT OF THE QUALITY SYSTEM OF THE APPLICANT**

SKG-IKOB determines whether the quality system of the applicant is in accordance with the provisions in chapter 5, or whether the candidate certificate holder is willing and able to set up and implement such a system within a reasonable timeframe after entering into the certification agreement. This shall be assessed by the certification body.

The certificate can only be issued when it has been determined that the quality system is in accordance with the provisions in chapter 5.

### **2.4 ISSUANCE OF A PRODUCT CERTIFICATE**

In accordance with the SKG-IKOB regulations for product certification, a product certificate will only be issued when the certification assessment results in a positive assessment.

Before the product certificate is issued, SKG-IKOB will enter into a contract with the candidate certificate holder according to the terms of the SKG-IKOB regulations for product certification, which includes the conditions of use of the product certificate.

### **2.5 EXTERNAL QUALITY ASSURANCE**

After entering into a certification agreement, SKG-IKOB performs monitoring as described in chapter 6.

### 3. REQUIREMENTS AND TESTING METHODS RELATED TO BUILDING DECREE / ENVIRONMENT-RELATED BUILDING DECREE

#### 3.1 GENERAL

This chapter covers the performance requirements related to Building Decree 2012 / Environment-related Buildings Decree that must be satisfied by a burglar-resistant or injury-safe section filling, as well as the testing methods for establishing that the requirements are satisfied.

*Table 1. Buildings Decree*

SKG-IKOB-KE article	Covered sections Buildings Decree	Section	Article; subsection
	<b>Regulations with respect to safety</b>		
3.2.1	Burglar resistance	2.15	2.130

*Table 2. Environment-related Buildings Decree*

SKG-IKOB-KE article	Covered sections Environment-related Buildings Decree	Section	Article; subsection
	<b>Regulations with respect to safety</b>		
3.2.1	Burglar resistance	4.2.16	4.100

#### 3.2 REGULATIONS RELATING TO SAFETY

##### 3.2.1 BURGLAR RESISTANCE (BD - Section 2.15 / EBD. Par. 4.2.16)

A door, a window, a frame and an equivalent construction component must meet the following performance requirements as indicated in BD article 2.130 / EBD article 4.100.

Performance requirement:

Doors, windows, frames and comparable construction components in an exterior partition structure of a non-communal area with a residential function, which are accessible for burglary as specified in NEN 5087, must have a level of burglar resistance in accordance with NEN 5096 that satisfies burglar resistance class 2 in this standard. This also applies to an interior partition structure between a non-communal area and an adjoining area of use or an adjoining communal area.

*Explanation:*

*Section fillings are frequently used in burglar-resistant facade elements. Depending on the burglar resistance class, a particular type of filling must be used with an equal resistance to penetration. NEN 5096 prescribes which types of glazing are suitable for use in doors, windows, frames and comparable construction components of the corresponding resistance class.*

##### **Determination method**

During the certification assessment, a test based on NEN-EN 356 (glass) or NEN 5096 (panel) is used to establish whether the section filling is suitable for use as burglar-resistant section filling in doors, windows, frames and comparable construction components.

##### **Conditions for the fitting of glazing**

Glazing that is suitable under this SKG-IKOB-KE for use as glazing in doors, windows, frames and comparable construction components must demonstrably satisfy the relevant resistance class of NEN 5096. In addition, the fitting guidelines of NPR 3577 must be followed.

**4. REQUIREMENTS AND TESTING METHODS NOT RELATED TO BUILDING DECREE / ENVIRONMENT-RELATED BUILDING DECREE**

**4.1 REQUIREMENTS RELATING TO GLAZING**

**4.1.1 SAFETY FROM INJURY**

Performance requirement:

Thermally toughened glass must satisfy the fragmentation test, as described in section 8 of NEN-EN 12150-1.

*Explanation:*

*The minimum number of pieces counted within the pane (50x50 mm) must correspond with the numbers shown in table 2.*

Laminated glass must be resistant to an impact load with a kinetic energy of 0.5 kNm, as described in NEN 6702: art. 9.6.

Testing methods and requirements are stated in in NEN 3568: section 3.


*Explanation:*

*The pane measuring 1940 x 880 mm (thickness: manufacturer dependent) is subject to a dynamic load using a leather bag filled with glass pearls with a total mass of 50 kg, from a fall height of 1 m.*

*The bag must make contact at the weakest point, i.e. in the middle of the pane.*

*When tested as described, the pane must satisfy one of the following requirements, as shown in table 2.*

Table 2: Classification

Glass type	Nominal thickness (in mm)	Minimum number of pieces	Product designation
Toughened float glass	4 or 5	20	 <b>SKG</b>
	6 - 19	30	
Toughened figure glass	4 - 10	20	
Laminated glass	<b>Criterion: a. or b.</b>		
	a.) the test pane remains whole		
	b.) the test pane breaks; In this case, the largest 10 pieces, collected 3 minutes after the fall test, may together weigh no more than the equivalent mass of 6500 mm <sup>2</sup> of the glass surface of the original pane. In addition, no single piece may be larger than 2500 mm <sup>2</sup> <i>Remark: The mass (g) of 6500 mm<sup>2</sup> of glass surface is the same as 16.25 times the thickness of the pane (mm)</i>		

*Explanation:*

*To prevent the occurrence of injury when glass breaks, safety glass can be used in those situations described in NEN 3569. If safety glass is used in insulating glazing, then at least the expected impact side must consist of safety glass.*

#### 4.1.2 PENETRATION RESISTANCE (DYNAMIC-MECHANIC)









Performance requirement:

Depending on the intended use, the glass must provide sufficient resistance in accordance with the test method described in NEN-EN 356.

*Explanation:*

*The severity of the test depends on the class that must be achieved. Before the test, the class that is to be tested against must be specified. The different classes are shown in table 3.*

*Table 3: Classification*

Class	Class		Product designations	Usage NEN 5096 / EN 1627
		Number of hits /impacts (ball) axe		
P1A		3 in a triangle		-
P2A	3000	3 in a triangle		-
P3A	6000	3 in a triangle		-
P4A	9000	3 in a triangle		RC 2
P5A	9000	3 x 3 in a triangle		RC 3
P6B	-	30 to 50		RC 4
P7B	-	51 to 70		-
P8B	-	More than 70		-

*Explanation:*

*If burglar-resistant glass is used in insulating glazing, the most burglar-resistant glass sheet should preferably be used on the inside of the building.*

*Glazing that can be classified from resistance category P4A upwards also satisfies product requirement 4.1.1: safety from injury.*



## 4.2 REQUIREMENTS RELATING TO (GLASS) PANELS

### 4.2.1 PENETRATION RESISTANCE (MANUAL)

Performance requirement:

Depending on the intended use, the panel must provide sufficient resistance to a manual attack in accordance with the test method described in NEN 5096.

The classification is shown in the table below. This specifies which tool set is used for each class and what the maximum contact time and test times are.

*Explanation:*



*The test consists of a preliminary test and main test.*

*The panel measuring 1100 x 900 mm (thickness: manufacturer dependent) must be fitted into a profile of wood, aluminium or synthetic material with rebate in accordance with the classification to be achieved.*

*On the 1st sample, dynamic loads are applied and the preliminary manual test carried out with the purpose of identifying the weak spots in the test element, on the basis of which an attack plan for the main manual test is drawn up.*

*The main manual test is carried out on the 2nd element.*

*Table 4: Classification*

<b>Toolset NEN 5096 (class)</b>	<b>Max. contact time (min.)</b>	<b>Max. total test time (min.)</b>	<b>Product designation</b>
A1 + A2 (RC 2)	3	15	
A1 + A2 + A3 (RC 3)	5	20	

*Explanation:*

*If the panel is a fixed component of the burglar-resistant facade construction, the burglar resistance mark with the relevant class of the element may be affixed.*

### 4.3 CLASSIFICATION AND MARKING

Products that are supplied under an SKG-IKOB product certificate must be permanently provided with a certification mark stating the following aspects:

- Product logo/name;
- The class indication of the burglar resistance and/or safety.

Examples for the sustainable certification mark to be affixed are; etching, blasting, (laser) engraving or sticker under the foil and/or glazing bar.



### 5. REQUIREMENTS FOR THE QUALITY SYSTEM OF THE APPLICANT

The SKG-IKOB certificate holder must maintain a quality management system that can be shown to correspond with the agreed requirements.

#### *Recommendation*

The quality management system of the certificate holder should preferably conform to NEN-EN-ISO 9001, with regard to the requirements for products mentioned in this assessment guideline, to ensure that the products supplied by the certificate holder are of a constant high quality.

#### *Requirements for the quality system described*

- A complaints register in which all complaints are registered relating to products which are covered by the SKG-IKOB product certificate. For each complaint, the complaints register must state how the complaint was analysed and how the complaint was dealt with;
- A procedure for dealing with complaints;
- Rules for the identification of the products in accordance with the product certificate;

In addition, the manufacturer must have a schedule for internal quality assurance, in which the relevant procedures and working instructions for the registration of information are laid down. The following information must be demonstrably recorded in this:

- the aspects that are monitored;
- the methods used for monitoring;
- the frequency with which monitoring take place;
- how the monitoring results are registered and stored;
- Instructions for marking and identification of the products;
- the suppliers that supply semi-manufactured products.

In order to carry out the required registrations, the manufacturer must have available the measuring equipment necessary for controlled manufacture.

## **6. MONITORING BY SKG-IKOB**

To maintain a SKG-IKOB product certificate, SKG-IKOB carries out inspections of the production and processing of the section fillings.

Currently, the visitation frequency is set to one inspection per year. SKG-IKOB checks by random sampling whether the products are manufactured and/or processed according to the technical specifications as stated in the certificate, as well as whether the quality system of the certificate holder meets the requirements.

Additionally SKG-IKOB checks whether the products manufactured by the certificate holder meet the performance requirements stated in the SKG-IKOB product certificate. This inspection of the product must take place at least once per year for each product certificate, in the following manner:

A sample manufactured under the SKG-IKOB product certificate is requested. This sample is tested by SKG-IKOB according to NEN-EN 356 or NEN-EN 12150-1 or visually assessed in comparison to the reference model if the section filling is of a material other than glass.

If the product performance and/or criteria for process control in manufacturing and/or processing are not met, this may lead to withdrawal of the product certificate and termination of the certification contract.

## 7. REQUIREMENTS FOR THE CERTIFICATION BODY

### 7.1 GENERAL

SKG-IKOB must meet the requirements as stated in NEN-EN-ISO/IEC 17065. SKG-IKOB must have regulations, or equivalent documentation, in which the general rules for certification are documented. In particular these include:

- The general regulations for performing an admission inspection, to be divided into:
  - The manner in which suppliers are informed about the processing of their application;
  - The carrying out of the inspection;
  - The decision as a result of the inspection carried out.
- The general regulations regarding the carrying out of periodic inspections and the monitoring aspects used.
- The measures to be taken by the Certification Body when deficiencies are determined.
- The rules for terminating a certificate;
- The options for appealing against decisions or measures taken by the Certification Body.

### 7.2 CERTIFICATION STAFF

The personnel involved in certification can be distinguished according to:

Inspector / lab.technician: In charge of carrying out the external inspection at the certificate holder;  
 (Sector) coordinator: In charge of conducting the entrance examination, the authorization of the assembly manual and the assessment of the inspectors' reports;  
 Certification manager: In charge of making decisions based on the admission tests performed, continuation of certification based on the checks performed and decisions about the need to take corrective measures.

### 7.3 QUALITY REQUIREMENTS

The qualifications of the operational staff of the certification body must meet the requirements of chapter 5 of NEN-EN-ISO/IEC 17065.

*Table 4: Qualifications of certification staff*

<b>NEN-EN-ISO/IEC 17065</b>	<b>Inspect. / lab.technician</b>	<b>(Sector) coordinator</b>	<b>Certification manager</b>
1. General education	MBO level (intermediate vocational education)	HBO level (higher professional education)	HBO level (higher professional education)
2. Specific education and experience	Knowledge regarding production techniques for glass and the required work instructions. Experience in handling measuring and testing equipment.	Detailed knowledge and management experience (min. 3 years) with regard to the glass sector and the production techniques used.	Detailed knowledge regarding the specific certification scheme and the regulations.

Certification staff must be demonstrably qualified by assessing education and experience against the requirements stated above. If qualification takes place by means of different criteria, this must be documented in writing.

#### **7.4 REPORT OF ADMISSION ASSESSMENT**

SKG-IKOB draws up a report on the results of the admission assessment. This report must meet the following requirements:

- **Completeness:** The report makes a statement regarding all the requirements mentioned in the assessment guideline.
- **Traceability:** The results on which the statements are based must be traceable documented.
- **Basis for the decision:** The decision maker for issuance of the certificate must be able to base his decision on findings as documented in the report.

#### **7.5 CERTIFICATION DECISION**

The decision regarding issuance of the certificate must be taken by a qualified decision maker, who was not involved in the certification examination. The decision must be documented and traceable.

#### **7.6 LAYOUT OF THE QUALITY DECLARATION**

The SKG-IKOB product certificate must be laid out according to the model in Annex I.

#### **7.7 VALIDITY OF THE SKG-IKOB PRODUCT CERTIFICATE**

The SKG-IKOB product certificate is issued for a term of 5 years.

#### **7.8 SANCTIONS POLICY**

The sanctions policy is drawn up annually by the Board of Experts.

#### **7.9 REPORT TO BOARD OF EXPERTS**

SKG-IKOB reports at least once a year on the certification activities performed. This report must cover the following subjects:

- Mutations in number of certificates incl. annexes (new/cancelled);
- Number of periodic inspections performed in relation to the specified frequency;
- Results of the periodic inspections;
- Measures imposed after identification of non-conformities;
- Complaints received from third parties about certified products.

#### **7.10 INTERPRETATION OF THE REQUIREMENTS**

The Board of Experts may document the interpretation of the requirements in this assessment guideline in one separate interpretation document. The Certification Body is obliged to remain informed of whether an interpretation document has been published, and if this is the case, to use the specified interpretations accordingly.

## 8. LIST OF SPECIFIED DOCUMENTS

### 8.1 STATUTORY REGULATIONS

- Building Decree 2012 / Stb. 2011, 416; last modified Stb. 2020, 529
- Environmental Buildings Decree / Stb. 2018, 291; last modified Stb. 2021, 227
- CPR 305/2011 / European Construction Products Regulation

### 8.2 STANDARDS AND NORMATIVE DOCUMENTS

Overview of standards and normative documents.

- NEN-EN 356: 1999 / Glas in gebouwen – Beveiligingsbeglazing – Beproeving en classificatie van de weerstand tegen manuele aanval
- NEN 3568: 1980 / Voorgespannen glas – Eisen en beproevingsmethoden
- NEN-EN 3569: 2011 / Vlakglas voor gebouwen – Risicobeperking van lichamelijk letsel door brekend en vallend glas – Eisen
- NPR 3577: 2011 / Beglazen van gebouwen
- NEN 5087: 2013 + A1:2016 / Inbraakveiligheid van woningen – Bereikbaarheid van dak- en gevelelementen: deuren, ramen en kozijnen
- NEN 5096: 2012 + A1:2015 / Inbraakwerendheid - Dak- of gevelelementen met deuren, ramen, luiken en vaste vullingen - Eisen, classificatie en beproevingsmethoden
- ISO 9001: 2015 / Kwaliteitsmanagementsystemen - Eisen
- NEN-EN 12150-1: 2015 + A1:2019 / Glas voor gebouwen - Thermisch gehard natronkalk veiligheidsglas – Deel 1: Definitie en beschrijving
- NEN-EN 13024-2: 2004 / Glas voor gebouwen - Thermisch gehard borosilicaat veiligheidsglas
- NEN-EN 14449: 2005 + AC:2005 / Glas voor gebouwen - Gelaagd glas en gelaagd veiligheidsglas
- NEN-EN 14179-2: 2005 / Glas voor gebouwen - Heat soaked thermisch gehard natronkalk-veiligheidsglas